IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

THE CITY OF PHILADELPHIA, Plaintiff, v. BANK OF AMERICA CORPORATION, BANK OF AMERICA, N.A., BARCLAYS BANK PLC, CITIGROUP INC., CITIBANK, N.A., CITIGROUP FINANCIAL PRODUCTS, INC., CREDIT SUISSE GROUP AG, DEUTSCHE BANK AG, J.P. MORGAN CHASE & CO., J.P. MORGAN CHASE BANK, N.A., ROYAL BANK OF CANADA, ROYAL BANK OF SCOTLAND PLC, and UBS AG, Defendants.	Civil No. **COMPLAINT** **JURY TRIAL DEMANDED**

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Plaintiff The City of Philadelphia, by and through its attorneys, brings this action and alleges as follows:

NATURE OF THE ACTION

1. This case involves Defendants' collusive and fraudulent manipulation of the key pricing terms in contracts that Wall Street banks promoted to state and local governmental entities, including The City of Philadelphia, across the United States, in order to reap tremendous windfall profits at the expense of those governmental entities and U.S. taxpayers.

2. During the early 2000s, Wall Street banks embarked on an aggressive campaign to cause state and local governmental entities—including municipalities, school districts, transportation authorities, sewer systems, and other tax-exempt debt issuers—to enter into what the banks alleged were effective hedges when those entities issued public debt.

3. In particular, the banks promoted a type of derivative known as an interest-rate swap, or a variant thereof, as a low-risk way for state and local governmental entities to manage the borrowing costs associated with issuing debt for public projects, such as new schools or new roads. In actuality, however, these instruments proved to be extremely risky, and have cost state and local governmental entities hundreds of millions or even billions of dollars, depleting treasuries, ruining budgets, and hindering the delivery of public services.

4. Meanwhile, the banks that issued these instruments, and the intermediaries who they enlisted to help promote them, profited greatly from the fees and ongoing payments associated with the instruments, which were often not fully disclosed. In some instances, the allure of such large fees gave rise to illegal kickbacks, bribery, and bid-rigging schemes, which are the subject of separate criminal actions and civil lawsuits.

5. Only recently has it emerged, however, that the misconduct by these banks with respect to these swaps was far more systemically damaging than previously believed.

Specifically, it is now known, as laid out in detail in this Complaint, that, in addition to promoting risky instruments to public entities, many of these banks were, at the same time, actively, secretly, and collusively suppressing the amounts paid by these banks under these swaps to ensure that state and local entities would never see the benefits they had been promised.

6. A common form of interest-rate swap, in the municipal context, is a fixed-to-floating rate agreement, where a bond issuer (such as The City of Philadelphia) makes payments to a counterparty (such as Defendants JPMorgan, Citi, or RBC) at a fixed rate of interest, and receives payments from the counterparty at a floating rate of interest. This floating rate is typically based on a purportedly objective index. The amount of the fixed- and floating-rate payments are calculated based on a notional principal amount, which may be all or a portion of the amount of the bond being issued, although there is no actual exchange of principal between the parties to the swap. Often the ongoing payments made under a swap are to be exchanged on the same day, in which case they are netted out.

7. One index Wall Street banks often used to set the floating rate and other terms in these swaps was the London Interbank Offered Rate ("Libor"). These banks represented that this index was appropriate to use because it was "a reliable indicator of the state of the money markets,"[1] and thus should ensure that payments made over time will bear a reasonable relationship with current market interest rates. But recent disclosures arising from governmental investigations have now made clear that the banks were actively, secretly, and collusively manipulating Libor for their own benefit during the life of Plaintiff's swaps.

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[1] British Bankers' Association, Annual Report (2010).

8. Defendants in this case worked together to suppress Libor, which had the immediate effect of raising the amount paid by the municipal party. This is because, when the banks suppressed Libor, their obligation under the floating-rate arm of the swap was reduced, and thus the net amount the state or local counterparty had to pay increased. Then, in the event the swap was terminated, suppression of Libor inflated the termination payments that had to be made.

9. This conduct is nothing short of naked price fixing. As laid out in more detail below, there is overwhelming evidence that Defendants—which are horizontal competitors—agreed to a collusive restraint that had the direct effect of raising amounts paid by The City of Philadelphia and thousands of other municipal and state entities nationwide on existing derivative instruments. This conduct also breached the terms of contracts governing the swaps and other derivative instruments in effect between the parties as well as the duty of the contracting parties to operate in good faith.

10. Defendants were members of a panel of banks established by the British Bankers' Association ("BBA") to determine Libor. The BBA determines Libor each day based on the representations of the individual panel banks as to the rates at which they could each borrow in various currencies on the London interbank lending market. These representations were supposed to be made independently and accurately. Each Defendant was a member of the panel for U.S. Dollar Libor ("USD Libor").

11. It is now clear, however, that Defendants abused their role in the Libor-setting process in order to reap massive profits at the expense of counterparties like The City of Philadelphia. From at least August 2007 through at least the end of 2010 (the "Relevant Period"), the panel banks, working in a secretly concerted fashion, made artificially low Libor

submissions to the BBA in a successful effort to suppress Libor for their financial gain. Defendants' scheme allowed them to reap windfall profits, while harming The City of Philadelphia and other investors. As part of this scheme, Defendants each agreed that, rather than exercising their independent business judgment, they would submit artificially low Libor rates and keep secret the fact that they, and their direct competitors, were doing this in a coordinated fashion.

12. As a result of this conduct, municipal entities, like The City of Philadelphia, were paid lower amounts during the life of their swaps, and they were subjected to huge—and sometimes devastating—financial penalties when they terminated the investments, which were artificially inflated by Defendants' misconduct. The City of Philadelphia alone paid tens of millions of dollars in so-called "termination fees." These fees were inflated even when the swap itself was tied to an index other than Libor, such as the SIFMA Municipal Swap Index, since the Libor forward curve is also used to determine the termination payment due for that type of swap. Other municipalities, school districts, transportation authorities, sewer authorities, universities, and state governments have also had to pay similarly exorbitant fees to terminate these investments.

13. For years, the banks deceived the public and government regulators about their efforts to manipulate Libor. Defendants held themselves out as competitors and represented that they were making their individual submissions consistent with their role as competitors in the marketplace. As a result, even extremely sophisticated market participants were unaware of this misconduct at the time it was occurring. Former Chairman of the Federal Reserve, Alan Greenspan, for example, has acknowledged that "what I never contemplated was that there were bankers who would purposely misrepresent facts to banking authorities. You were honor-bound

to report accurately, and it never entered my mind that, aside from a fringe element, it would be otherwise."[2]

14. The panel banks secretly worked together and with the BBA to hide their conduct and to engage in a campaign of misinformation to mask the widespread systematic suppression that was occurring. The success of Defendants' efforts to shield their misconduct was aided by the onset of a global financial crisis of historic proportions, which made it impossible for investors to know contemporaneously that Libor rates were being manipulated. Defendants' effort to hide their conduct from the public was successful until the results of investigations by governmental bodies armed with subpoena powers were disclosed.

15. The relationships, contracts, purchases, and payments at issue with the Defendants are set forth in the Exhibits to this Complaint. In entering into, performing under, and terminating these and other transactions, The City of Philadelphia relied on the integrity of how Libor was set and the truthfulness of Defendants' representations about how Libor was set. By covertly suppressing Libor, Defendants artificially lowered the amount they were contractually obligated to pay The City of Philadelphia under the swaps and/or inflated the amount The City of Philadelphia had to pay to terminate the swaps.

16. As noted, when swaps are terminated, the termination payment is calculated by using discount factors calculated from the relevant Libor forward curve at the time of the termination. When The City of Philadelphia terminated the swaps during the Relevant Period, the Libor forward curves artificially projected low Libor rates for the remaining terms of those swaps due to Defendants' ongoing suppression of the Libor rates. As a result, The City of

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[2] Liam Vaughan & Gavin Finch, *Libor Lies Revealed in Rigging of $300 Trillion Benchmark*, Bloomberg, Jan. 28, 2013, *available at* http://www.bloomberg.com/news/2013-01-28/libor-lies-revealed-in-rigging-of-300-trillion-benchmark.html.

Philadelphia was effectively forced to lock in and make inflated payments based on an artificially suppressed level of Libor for the remaining terms of the swap transactions, in many cases five to ten years. This resulted in The City of Philadelphia making termination payments that were materially inflated in connection with the swap unwinds.

17. Defendants in bad faith exploited their control over Libor for their own benefit, at the expense of The City of Philadelphia and other investors worldwide. The City of Philadelphia suffered significant harm as a result of the systematic and collusive suppression of Libor. Accordingly, The City of Philadelphia seeks to recover the damages it has sustained as a result of Defendants' violations of federal and state law and injunctive relief. The City of Philadelphia asserts claims for (i) breach of contract; (ii) breach of the implied covenant of good faith and fair dealing; (iii) common-law fraud; (iv) aiding and abetting fraud; (v) unjust enrichment; (vi) tortious interference with contract; (vii) tortious interference with prospective business relations; (viii) civil conspiracy; and (ix) violations of the Sherman Act, 15 U.S.C. § 1, *et seq.*, and the Clayton Act, 15 U.S.C. § 12, *et seq.*

PARTIES AND RELEVANT NON-PARTIES

18. ***Plaintiff.*** Plaintiff The City of Philadelphia is a municipal corporation organized under the laws of the Commonwealth of Pennsylvania, and is a political subdivision of the Commonwealth of Pennsylvania. As detailed below, The City of Philadelphia entered into swaps in which the rate of return and/or termination fees were tied to Libor and was injured as a result of Defendants' unlawful conduct.

19. ***Defendants.*** The Defendants, or their affiliates, were all USD Libor panel banks during the Relevant Period. Defendants Citi, JPMorgan, and RBC were also transactional counterparties with The City of Philadelphia for the interest rate swap transactions at issue, as detailed in the exhibits, and are referred to herein as the "Counterparty Defendants."

20. ***Bank of America.*** Defendant **Bank of America Corp.** ("BAC") is a Delaware corporation headquartered in Charlotte, North Carolina**.** Defendant **Bank of America, N.A.** ("BANA") is a federally chartered national banking association headquartered in Charlotte, North Carolina. BAC is the parent company of BANA. Defendants BAC and BANA are collectively referred to herein as **"Bank of America."** Bank of America was at all relevant times a member of the USD Libor panel.

21. ***Barclays.*** Defendant **Barclays Bank plc ("Barclays")** is a British public limited company headquartered in London, England. Barclays was at all relevant times a member of the USD Libor panel.

22. ***Citi.*** Defendant **Citigroup, Inc.** is a Delaware corporation headquartered in New York, New York. Defendant **Citibank, N.A.** is a federally chartered national banking association headquartered in New York, New York, and is a wholly owned subsidiary of Citigroup, Inc. Defendant **Citigroup Financial Products, Inc.** (formerly known as Salomon Brothers Holding Company, Inc.) is a Delaware corporation based in New York, New York, and is a subsidiary of Citigroup Global Markets Holdings Inc., which is a subsidiary of Citigroup, Inc. Defendants Citigroup, Inc., Citibank, N.A., and Citigroup Financial Products, Inc. are collectively referred to herein as **"Citi."** Citi was at all relevant times a member of the USD Libor panel. Citi participated in the unlawful conduct alleged in this Complaint both directly and through its subsidiaries and affiliates.

23. ***Credit Suisse.*** Defendant **Credit Suisse Group AG ("Credit Suisse")** is a Swiss company headquartered in Zurich, Switzerland. Credit Suisse was at all relevant times a member of the USD Libor panel.

24. ***Deutsche Bank.*** Defendant **Deutsche Bank AG ("Deutsche Bank")** is a German financial services company headquartered in Frankfurt, Germany. Deutsche Bank was at all relevant times a member of the USD Libor panel.

25. ***JPMorgan.*** Defendant **J.P. Morgan Chase & Co.** is a Delaware corporation headquartered in New York, New York. Defendant **J.P. Morgan Chase Bank, N.A. ("JPMC Bank")** is a federally chartered national banking association headquartered in New York, New York, and is a wholly owned subsidiary of J.P. Morgan Chase & Co. J.P. Morgan Chase & Co. and JPMC Bank are collectively referred to herein as **"JPMorgan."** JPMorgan was at all relevant times a member of the USD Libor panel.

26. ***RBC.*** Defendant **Royal Bank of Canada ("RBC")** is a Canadian company headquartered in Toronto, Canada. RBC was at all relevant times a member of the USD Libor panel.

27. ***RBS.*** Defendant **The Royal Bank of Scotland plc ("RBS")** is a United Kingdom public limited company headquartered in Edinburgh, Scotland. RBS was at all relevant times a member of the USD Libor panel.

28. ***UBS.*** Defendant **UBS AG ("UBS")** is a Swiss company based in Basel and Zurich, Switzerland. UBS was at all relevant times a member of the USD Libor panel.

29. ***Other relevant non-parties.*** In addition to Defendants, various other entities and individuals participated in, conspired with Defendants in furtherance of, and performed acts and made statements that aided and abetted and furthered the unlawful conduct alleged herein.

JURISDICTION AND VENUE

30. This Court has diversity jurisdiction under 28 U.S.C. § 1332, as this is an action between citizens of different States and citizens or subjects of a foreign state, and the matter in

controversy exceeds the sum or value of $75,000, exclusive of interest and costs, as to each Defendant.

31. In addition, The City of Philadelphia brings this action under Sections 4 and 16 of the Clayton Act, 15 U.S.C. §§ 15 and 26, to remedy Defendants' violations of Section 1 of the Sherman Act, 15 U.S.C. § 1, and this Court has federal question jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1337. This Court also has supplemental jurisdiction over The City of Philadelphia's state-law claims pursuant to 28 U.S.C. § 1367, because all of the claims arise from the same facts and circumstances and form part of the same case or controversy.

32. Venue is proper in this District under Sections 4, 12 and 16 of the Clayton Act, 15 U.S.C. §§ 15, 22, and 26, and 28 U.S.C. § 1391(b), (c) and (d). One or more of the Defendants resided, transacted business, were found, or had agents in the District, a substantial part of the events giving rise to The City of Philadelphia's claims arose in the District, and a substantial portion of the affected interstate trade and commerce described herein has been carried out in this District.

BACKGROUND

33. As discussed in more detail below, Defendants actively, secretly, and collusively manipulated Libor in order to inflate the net payments they received and the pricing terms for amounts due on early termination of the interest-rate swaps and other similar derivatives that they aggressively pushed upon state and local governmental entities. This section provides background about how Libor is calculated and how it works.

A. The Process for Setting Libor

34. Libor is supposed to be the average interest rate at which lending banks in London could borrow from other banks in a reasonable amount in the interbank market. It is based on a survey of a panel of banks asking the question: "At what rate could you borrow funds, were you

to do so by asking for and then accepting inter-bank offers in a reasonable market size just prior to 11 a.m.?"

35. Each panel bank submits its rates every London business day electronically to Thomson Reuters, the agent of the BBA. Once each bank has submitted its rate, the submitted rates are ranked. During the relevant period, for USD Libor, the highest and lowest four were excluded (to lessen the impact of outliers), with the rest being averaged to calculate the official rate that would be published. This is referred to as an interquartile method of averaging.

36. Thomson Reuters then electronically communicates the official rates—called the Libor "fixings"—to the BBA's licensees, including companies located in the United States such as *The Wall Street Journal* and *Bloomberg News*, who then further publish the rate. Defendants' submissions are also transmitted through the BBA's licensed data vendors. Libor and Defendants' submissions were published on a daily basis.

37. The BBA publishes rules governing the way that the panel banks determine their submissions. These rules were supposed to ensure that submissions were based on an individual bank's truthful answer to the aforementioned question and that they would not be the product of collusion among the competitors involved in the Libor-setting process. One panel rule required each of the panel banks independently to exercise its good faith judgment each day about the interest rate that it would be required to pay, based upon its own knowledge of competitive conditions in the market, including supply and demand conditions and the panel bank's own competitive posture as a borrower within the market for interbank loan funds. Through this mechanism, Libor was supposed to reflect, and move from day to day based upon, actual competitive conditions in the London interbank lending market.

38. As Defendants Barclays, UBS, and RBS admitted:

> The basis for a Contributor Panel bank's submission, according to the BBA, must be the rate at which members of the bank's staff primarily responsible for management of a bank's cash, rather than a bank's derivative trading book, consider that the bank can borrow unsecured interbank funds in the London money market. Further, according to the BBA, a Contributor Panel bank may not contribute a rate based on the pricing of any derivative instrument. In other words, a Contributor Panel bank's LIBOR submissions should not be influenced by its motive to maximize profit or minimize losses in derivative transactions tied to LIBOR.

Barclays Statement of Facts ("SOF") ¶ 6; UBS SOF ¶ 7; RBS SOF ¶ 7.

39. Another panel rule mandated that each panel bank's daily submissions would remain confidential until after the calculation and publication of the daily Libor submissions. This rule was meant to prevent collusion and ensure that each panel bank's submission would reflect only that panel bank's independent expert judgment concerning its own competitive posture as a borrower within the market. As Defendants Barclays, UBS, and RBS have admitted: "According to the BBA, from at least 2005 to the present, each Contributor Panel bank must submit its rate without reference to rates contributed by other Contributor Panel banks." Barclays SOF ¶ 6; UBS SOF ¶ 7, RBS SOF ¶ 7.

40. Another panel rule mandated that upon publication of each day's Libor, the BBA, through Thomson Reuters, simultaneously published the individual rates submitted in the Libor-setting process for each panel bank, currency and tenor for that day. This third rule made the process and the individual panel bank submissions transparent on an *ex post* basis, to the capital markets and the panel banks themselves. The use of Thomson Reuters, an agency separate and independent from the BBA, to collect submissions, and calculate, and publish the daily Libor rates, purportedly signaled the independence of those rates from the collective self-interests of the BBA and the panel members.

41. Because the capital markets view the funding costs of the panel banks as reflective of their relative creditworthiness and financial strength, the daily disclosure of Libor

submissions signaled each panel bank's creditworthiness and financial strength to the market. Thus, as the BBA has stated, the Libor-setting process was supposed to reflect "a unique snapshot of competitive funding costs."

42. On its website, the BBA explains that "a bank will know what its credit and liquidity risk profile is from rates at which it has dealt and can construct a curve to predict accurately the correct rate for currencies or maturities in which it has not been active." Defendants publicly claimed they abided by the BBA's rules and based their individual submissions on their cost of funds in the London interbank market without reference to rates submitted by other Panel banks or the pricing of any derivative financial instrument.[3]

43. Libor is calculated for different borrowing periods and currencies, each of which had its own panel of banks. Defendants were all members of the USD Libor panel during the Relevant Period. There is substantial overlap in membership among the panels. For example, during the Relevant Period, nine of the sixteen banks that served on the USD Libor panel also served on the Japanese yen ("JPY"), Swiss franc ("CHF"), and Euribor panels.[4] Similarly, fourteen banks participated on both the USD and JPY panels[5] and twelve banks participated on both the USD and CHF panels.[6]

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[3] *See* Letter from Denis J. McInerney, Chief, Fraud Section, Criminal Division, United States Department of Justice, Appendix A (Dec. 18, 2012) ("UBS SOF") ¶ 7; BBA, *Welcome to bbalibor*, *the Basics*, http://www.bbalibor.com/bbalibor-explained/the-basics; BBA, *Welcome to bbalibor, Setting bbalibor*, http://www.bbalibor.com/technical-aspects/setting-bbalibor; BBA, *Welcome to bbalibor, Definitions*, http://www.bbalibor.com/bbalibor-explained/definitions.

[4] Those banks are Bank of Tokyo, Barclays, Citi, Deutsche Bank, HSBC, JPMorgan, Lloyds, RBS, and UBS.

[5] Those banks are Bank of America, Bank of Tokyo, Barclays, Citi, Deutsche Bank, HSBC, JPMorgan, Lloyds, Norinchukin, Rabobank, RBS, Société Générale (beginning in 2009), UBS, and WestLB.

[6] Those banks are Bank of Tokyo, Barclays, Citi, Credit Suisse, Deutsche Bank, HSBC, JPMorgan, Lloyds, RBS, Société Générale (beginning in 2009), UBS, and WestLB.

B. <u>The BBA</u>

44. Throughout the Relevant Period, the BBA was the leading trade association for the U.K. banking and financial services sector. Defendants were horizontal competitors and member banks of the BBA. Defendants competed among themselves and with other firms (including non-banks) in seeking to borrow funds, attract deposits, and provide a broad range of financial services. As part of their competitive efforts, Defendants used their status as panel banks to market themselves to investors, and Defendants also sought to market themselves based on their integrity. As a BBA member bank, each Defendant carried out that competition by, among other things, reporting its purported borrowing costs in its Libor submissions.

45. The BBA is not a regulatory body and has no regulatory function. Its activities are not overseen by any U.K. or foreign regulatory agency. Instead, it is governed by a board of member banks that meets four times each year. The board is composed of senior executives from twelve banks, including Defendants Barclays, Citi, Credit Suisse, Deutsche Bank, JPMorgan, and RBS. As described by Richard Werner, a finance professor at the University of Southampton, "This is a quaint, insider club which is clearly not fit for the 21st Century."[7]

46. The panel banks were supposed to make their Libor submissions as independent actors. Instead, Defendants ignored the Libor panel rules and took advantage of the BBA's self-governing structure, making the BBA a *de facto* cartel. This cartel provided the means through which Defendants could suppress Libor. As an RBS trader stated to a colleague in a recently-released instant message, "[i]t's just amazing how Libor fixing can make you that much money . . . ***It's a cartel now in London***."[8] Others have observed in connection with the

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[7] Lindsay Fortado, Liam Vaughan & Joshua Gallu, *UBS Turning Whistleblower in Libor Probe Pressures Rivals*, Bloomberg, Feb. 21, 2012.

[8] RBS CFTC Order at 14-15.

misconduct that has come to light that the BBA's administration of Libor during the Relevant Period was a case of the proverbial fox guarding the henhouse.

47. Through 2010, the Foreign Exchange and Money Markets Committee of the BBA had responsibility for Libor. Thirteen "active market participants" comprised this committee. Although the BBA does not disclose who is on this committee, UBS and RBS have admitted that they were represented.[9] Other Defendants also served on the committee. The chair and two deputy chairs were representatives from the panel banks.

48. The BBA presented itself as having a robust structure in place to oversee Libor and to ensure its integrity. It turns out, however, that this was a sham. As recently reported by Martin Wheatley, chief executive of the Financial Conduct Authority (though at the time managing director of the Financial Services Authority ("FSA")) who was asked by the U.K. government to examine Libor's future after it was found to have been manipulated on multiple instances: "Oversight of Libor is the responsibility of a committee set up by the BBA with two subcommittees looking at unresolved problems and disciplinary procedures respectively. ***The only problem is that these committees hardly ever met***." Mr. Wheatley concluded that "essentially, people had an overt level of trust in a system that did not have the right level of checks and balances in place."

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[9] UBS SOF ¶ 85; Financial Services Authority, Final Notice to UBS AG, FSA 186958, ¶ 122 (Dec. 19, 2012) ("UBS FSA Final Notice"); Financial Services Authority, Final Notice to the Royal Bank of Scotland, FSA 121882, ¶ 89 (Feb. 6, 2013) ("RBS FSA Final Notice").

49. In January 2010, potentially in an effort to limit its liability, the BBA created a new entity, BBA LIBOR Ltd., to assume responsibility for the day-to-day running of the benchmark.[10]

50. In September 2012, an independent panel recommended that the BBA be stripped of its role in Libor rate setting. Mr. Wheatley noted at the time, "the BBA acts as the lobby organization for the same submitting banks that they nominally oversee, creating a conflict of interest that precludes strong and credible governance." In February 2013, the BBA agreed to cede control of Libor to a new operator.

C. <u>Libor's Role in the Financial Marketplace</u>

51. The use of Libor to adjust long-term floating rate contracts became one of the principal means by which the prices of such contracts were determined by competitive forces. Libor was held out and understood by investors as reflecting the competitive forces of supply and demand of funding in the interbank lending market and the relative creditworthiness of the panel banks. Because Libor was established as a competitively determined rate set on a daily basis, it was used as a benchmark for interest rates throughout the world and, as the BBA has acknowledged, was thus "relied on by the market as a reliable benchmark."[11]

52. The BBA has also observed that Libor is "the primary benchmark for short term interest rates globally."[12] As the Department of Justice ("DOJ") explained in its December 19,

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[10] *See* David Enrich & Max Colchester, *Before Scandal Clash over Control of Libor*, Wall St. J., Sept. 11, 2012, *available at* http://online.wsj.com/article/SB10000872396390443847404577631404235329424.html.

[11] BBA, *Libor Gets Enhanced Governance and Scrutiny Procedures*, http://www.bbalibor.com/news-releases/libor-gets-enhanced-governance-and-scrutiny-procedures.

[12] BBA, *Welcome to bbalibor, the Basics*, http://www.bbalibor.com/bbalibor-explained/the-basics.

2012, Statement of Facts regarding Libor-related misconduct at UBS ("UBS SOF"): "Because of the widespread use of LIBOR and other benchmark interest rates in financial markets, these rates play a fundamentally important role in financial systems around the world." Defendants knew that, given the vast universe of financial instruments Libor impacts, "even a small manipulation" of the rate "could potentially distort capital allocations all over the world."[13]

53. Accurate individual submissions further the competition among Defendants and others for funds, deposits, trading derivatives like interest rate swaps, and otherwise. In addition, because Libor was supposed to be determined, when set in accordance with the BBA Libor panel rules, by the competitive forces of supply and demand and the competitive credit risk posture of the panel banks, it would represent an effective price discovery mechanism leading to efficient allocation of capital and risk. Thus, the utility of Libor indices to the financial markets depended upon its ability accurately to capture and reflect competitively determined funding costs.

ALLEGATIONS REGARDING DEFENDANTS' MISCONDUCT

I. DEFENDANTS PUSHED INTEREST-RATE SWAPS FOR THEIR OWN FINANCIAL INTEREST ON STATE AND LOCAL GOVERNMENTAL ENTITIES.

54. As a result of an aggressive campaign by Wall Street banks, interest rate swaps have proliferated over the past two decades including with state and local bond issuers. The International Swaps and Derivatives Association ("ISDA") estimated that the collective notional amount on interest rate swaps was approximately $2.3 trillion in 1990. By the late 2000s, that figure had grown well into the hundreds of trillions of dollars.

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[13] Rosa M. Abrantes-Metz & Albert D. Metz, *How Far Can Screens Go in Distinguishing Explicit from Tacit Collusion? New Evidence from the Libor Setting*, CPI Antitrust Chronicle, Mar. 2012.

55. Defendants and other Wall Street banks made tremendous profits selling these swaps to state and local governmental entities. But like so many other instruments pushed by Wall Street banks during this period, these swaps proved to be very bad deals for many of these governmental entities.

56. An interest rate swap is a contract between two counterparties, such as between municipal bond issuers and a financial institution under which the parties agree to exchange interest rate payments on a notional amount for a fixed period. The simplest and most common interest rate swaps (called "plain-vanilla" swaps) are agreements in which one party agrees to pay a fixed interest rate using a "notional amount," while the other party agrees to pay a floating rate, which is typically based on Libor, on the same notional amount. A notional amount is the stated principal amount on which the swap is based and, in the municipal context, is often all or some percentage of the bond issuance that occurs at the same time the swap is executed.

57. Wall Street banks promoted swaps as a way for issuers of public debt to manage interest rates. For example, an issuer may want to pay the floating rate under a fixed-to-floating rate swap with the goal of incurring lesser borrowing costs by obtaining a lower "all-in" floating rate than it would otherwise be able to get if it issued the debt directly. Swaps were also promoted as a hedge against dramatic interest rate changes.

58. Under a swap, the two counterparties are often obligated to make their respective payments on or around the same day, with the practical consequence that the payments are netted. One party can thus be considered as "in the money"—receiving net payments under the swap – while the other party will be "out of the money"—obligated to pay under the swap. As discussed further below, one direct effect of Defendants' misconduct was to reduce the net amount The City of Philadelphia received, and/or to increase the net amount it paid, under swaps

tied to Libor during the Relevant Period, even when the counterparties' payments did not occur at the same time.

59. During the early 2000s, sophisticated investment bankers took advantage of municipalities' inexperience with derivatives products, created by the banks themselves, and the lack of transparency in the swaps market to lure municipalities into agreements that were not in the municipalities' long-term interests. Large Wall Street banks, including Defendants JPMorgan and Citi, promoted swaps to government entities, such as municipalities, school districts, and transportation authorities, across the country. Defendants encouraged local governments to enter into interest-rate swaps notwithstanding the associated risks and dangers inherent in the transactions they proposed.

60. As reported in the New York Times, for example, banks' promotional materials regarding these swaps gushed about the positives while minimizing or ignoring the substantial risks altogether:

> Derivative products are unique in the history of financial innovation," gushed a pitch from Citigroup in November 2007 about a deal entered into by the Florida Keys Aqueduct Authority. Another selling point: 'Swaps have become widely accepted by the rating agencies as an appropriate financial tool.' And, the presentation said, they can be easily unwound (for a fee, of course).[14]

61. But these investments trumpeted as "innovations" were in fact riddled with risks, which were realized in the form of substantial losses during the financial crisis that started in 2007. Many municipal interest rate swaps were linked to specific issuances of debt securities in the form of auction rate securities ("ARS").

62. For ARS, the rate of interest paid by the municipal bond issuer was periodically determined by "Dutch auctions" conducted by Wall Street banks and held every 7, 28, 35, or 49

[14] New York Times, *The Swaps that Swallowed Your Town*, March 6, 2010.

days. The auction "clearing rate" was the lowest rate at which all securities offered for sale were matched with a bid. This clearing rate became the new interest rate paid until it was reset at the next auction. Until the financial crisis the Wall Street banks supported these auctions to prevent fails. Once the banks underwriting these securities stopped supporting these auctions, the auctions began to fail. After several fails, the interest rate increased to a "penalty" or "maximum rate" under the terms of the ARS. The penalty rates paid to bondholders for municipal ARS could be very high, sometimes reaching a penalty rate of up to 20% and forcing municipalities to pay hundreds of thousands of dollars per week in additional interest to ARS holders.

63. While interest payments on ARS were increasing materially and the banks' credit was deteriorating, Libor also should have increased, producing higher floating-rate swap payments to ARS issuers. But that did not happen because Defendants were suppressing Libor. The result was the swaps failed as hedges. Municipal bond issuers were forced to pay higher interest rates to ARS holders as well as making increasing payments on their interest rate swaps.

64. Investment banks lured municipalities across the country into these swap agreements not only by downplaying the inherent risks, but also by using intermediaries with a conflict of interest to push the instruments and sometimes even resorting to bribing municipalities' bond advisors to promote swap transactions. These bribes were in the form of advisory fees, undisclosed payments, or payments to charities associated with bond advisors. Such conduct led, for example, to JP Morgan Securities settling charges brought by the SEC against JP Morgan Securities and two of its former managing directors involving misconduct in Jefferson County, Alabama, which has been widely reported.

65. Although the incidents in Jefferson County are especially reprehensible, they are not isolated occurrences. A number of other individuals—including several former bank

executives—have been charged with, pleaded guilty to, or been convicted of engaging in similar types of misconduct involving municipalities and other governmental entities. Reflecting the widespread scope of corruption, the Department of Justice's investigation into bid-rigging in the market for investment contracts for the proceeds of municipal bonds has resulted in substantial restitution, penalties, and disgorgement to federal and state agencies, including by UBS, JP Morgan Chase & Co., and Bank of America.

66. Whether the victims of aggressive sales tactics or outright criminal conduct, hundreds or even thousands of municipalities and governmental entities across the country have suffered substantial losses arising from municipal derivatives, leaving towns struggling to meet their financial obligations to the city's taxpayers, school districts struggling to meet their obligations to children, and transportation agencies struggling to fulfill their responsibility to the public.

67. But we now know that, in addition to the structural risk from swaps and the types of overt criminal conduct engaged in by executives of Bank of America, JPMorgan, RBC, UBS and others, Defendants took additional steps systematically to rig the game in their favor. Specifically, as detailed below, they artificially and collusively suppressed Libor, which had the effect of secretly tilting the swaps in their favor, causing the banks to be substantially "in the money" when they did not deserve to be, and effectively raising the losses to The City of Philadelphia and others for these transactions.

68. In addition, when these long-term swaps were terminated, the termination payments were also inflated due to the artificial Libor suppression. As noted above, in swaps tied to Libor or other common municipal indices, such as the SIFMA Municipal Swap Index, the termination payment is calculated by using discount factors calculated from the relevant Libor

forward curve at the time of the termination. When The City of Philadelphia terminated swaps during the Relevant Period, the Libor forward curves artificially projected low Libor rates for the remaining terms of those swaps due to Defendants' ongoing suppression of the Libor rates. As a result, The City of Philadelphia was effectively forced to lock in and make inflated termination payments based on an artificially suppressed level of Libor for the remaining terms of the swap transactions, in many cases five to ten years. This resulted in The City of Philadelphia making termination payments at materially inflated prices in connection with the swap unwinds.

II. <u>DEFENDANTS MANIPULATED USD LIBOR.</u>

69. The first public revelation regarding the existence of government investigations into Libor manipulation occurred on March 15, 2011, when UBS disclosed that the bank had "received subpoenas . . . in connection with investigations regarding submissions to the [BBA]." UBS stated it understood "that the investigations focus on whether there were improper attempts by UBS, either acting on its own or together with others, to manipulate LIBOR rates at certain times." UBS further disclosed that it had "received an order to provide information to the Japan Financial Supervisory Agency concerning similar matters." UBS stated it was "conducting an internal review" and was "cooperating with the investigations."

70. Subsequent reports disclosed that other governmental regulators around the world were looking into issues relating to Libor. The first public disclosure of the results of these investigations occurred in July 2012, when the settlements with Barclays were announced.

A. <u>Facts Made Public by Barclays' Settlements</u>

71. Barclays avoided prosecution in the United Kingdom and the United States by entering into settlements with the FSA, the U.S. Commodity Futures Trading ("CFTC"), and the DOJ's Fraud Section. In the United Kingdom, as part of its settlement with the FSA, Barclays agreed to pay £290 million ($433.5 million) in fines. The CFTC issued an Order Instituting

Proceedings ("Barclays CFTC Order") finding that Barclays violated the Commodity Exchange Act. And Barclays admitted to a detailed Statement of Facts ("Barclays SOF"), which cited scores of internal emails, as well as communications with other panel banks, in furtherance of their scheme to manipulate and suppress the published Libor rates. Marcus Agius, then-Chairman of Barclays, said in a press release at the time: "The Board takes the issues underlying today's announcement extremely seriously and views them with the utmost regret."

72. Barclays admitted that, starting at least by August 2007, it intentionally submitted "improperly low" USD Libor quotes that did not reflect Barclays' actual borrowing costs. Barclays confirmed that "all of the Contributor Panel banks, including Barclays, were contributing rates that were too low" during this same period. Following the settlements, Agius and Barclays' CEO Bob Diamond resigned—just before Barclays' Chief Operating Officer testified that Diamond had instructed him to lower the bank's Libor submissions. On July 4, 2012, the day after Diamond stepped down, he told the British Parliament: "There is an industry-wide problem coming out now."

73. The disclosures in July 2012 resulting from these governmental investigations into Barclays revealed, for the first time, the type of collective manipulation of Libor by Defendants that had occurred, as summarized in the following paragraphs.

74. In early September 2007, after Barclays reported higher USD Libor rates than its peers, a *Bloomberg* article entitled "Barclays Takes a Money-Market Beating" questioned "[s]o what the hell is happening at Barclays and its Barclays Capital securities unit that is prompting its peers to charge it premium interest in the money market?" Other newspapers, including the *Financial Times* and *The Standard*, ran similar articles.

75. Thereafter, on November 29, 2007, the supervisor of the USD Libor submitters at Barclays convened a meeting with senior Barclays Treasury managers and the USD Libor submitters in which he noted that if the submitters made accurate quotes, they would be 20 basis points above "the pack." Barclays could not have known where its submission would stand relative to other banks without knowing those banks' submissions prior to publication, in violation of the Libor panel rules. The supervisor elevated the issue to more senior levels of Barclays' management, after which the group decided to adjust Barclays' Libor submission downward by 20 basis points in order to stay within the range of other banks' low Libor submissions. Barclays managers issued standing instructions to stay within specific ranges of other panel banks' USD Libor submissions, indicating that Barclays believed it would have continued access to the confidential Libor submissions of other banks before they were published. According to the CFTC's review of the evidence it collected, "Senior Barclays Treasury managers provided the [Libor] submitters with the ***general guidance*** that Barclays's submitted rates should be ***within ten basis points*** of the submissions by the other U.S. Dollar panel banks . . . ." Barclays CFTC Order at 20 (emphasis added).

76. That same day, a Barclays manager contacted a representative of the BBA to advise that "[USD] LIBORs are being set lower than where they ought to be" and informed the BBA that this issue applied to all of the panel banks. The Barclays manager stated that Defendants were submitting rates that were too low because "banks are afraid to stick their heads above the parapet and post higher numbers because of what happened to [Barclays] when [Barclays] did. You get shot at." According to the Barclays manager, "other banks 'are reluctant to post higher and because no one will get out of the pack, ***the pack sort of stays low***.'" Barclays SOF ¶ 43 (emphasis added).

77. On November 30, 2007, a private discussion occurred between a representative of Barclays and the FSA. An internal Barclays memorandum reveals that Barclays "didn't say anything along the lines of, you know, we're not posting where we think we should." On December 4, 2007, however, a senior Barclays USD Libor submitter emailed his supervisor about submitting a 1-month Libor lower than he would prefer if he were "given a free hand," and explicitly stated: "My worry is that we (both Barclays and the contributor bank panel) are being seen to be contributing ***patently false rates***. We are therefore being ***dishonest by definition*** and are at risk of damaging our reputation in the market and with the regulators." Barclays CFTC Order at 22 (emphasis added). In another email, the senior Barclays USD Libor submitter wrote: "I will be contributing rates which are nowhere near the clearing rates for unsecured cash and therefore **will not be posting honest prices**." Id. at 24 (emphasis added).

78. Barclays' managers specifically instructed Barclays USD Libor submitters to make artificially low Libor submissions and to do so in coordination with the submissions of other Defendants—that is, to stay "within the pack." Barclays' submitters were told "they would have to deal with the settings, meaning how to make LIBOR submissions per this directive, on a 'day-to-day-basis.'" The CFTC found that Barclays' managers "frequently discussed with the U.S. Dollar LIBOR submitters and their supervisor the specific rates to be submitted, in order to ensure they were in compliance with the directive." The CFTC observed that those discussions "were memorialized in multiple recorded telephone calls and emails during the more than 18-month financial crisis period."

79. Internal communications at Barclays further reveal that the other panel banks were doing the same. In one internal Barclays email, for instance, a Barclays employee noted that Lloyds' USD Libor submission was artificially low. Similarly, on October 3, 2007, a

Barclays employee noted internally that an unidentified panel bank submitted a Libor rate that was lower than the rate it actually paid. On April 27, 2008, a Barclays manager conceded in a recently-disclosed liquidity call to the FSA "***to the extent that, um, the LIBORs have been understated, are we guilty of being part of the pack? You could say we are.***" In communications between November 2007 and October 2008, Barclays' employees revealed that "all of the Contributor Panel banks, including Barclays, were contributing rates that were too low." Barclays SOF ¶ 42.

80. According to documents found by the government investigations, on numerous occasions between January 2005 and June 2009, Barclays' derivatives traders requested that submitters make false submissions that favored their trading positions. Specifically, the CFTC found that "Barclays based its LIBOR submissions for U.S. Dollar . . . on the requests of Barclays' swaps traders, including former Barclays swaps traders, who were attempting to affect the official published LIBOR, in order to benefit Barclays' derivatives trading positions; those positions included swaps and futures trading positions." Barclays CFTC Order at 2.

81. The majority of these requests came from traders on Barclays' New York Interest Rate Swaps Desk and involved USD Libor, and included requests made on behalf of other banks. The requests were made openly, sometimes shouted across the office to confirm that no conflicting requests for manipulation were made. The traders' conduct was common and pervasive, and known by other traders and trading desk managers located near the New York Swaps Desk. Some traders made entries in their electronic calendars to remind themselves what requests to make of Barclays' Libor submitters the next day.

82. The following provide just a sample of the numerous requests made by Barclays' traders, as revealed in documents quoted in Barclays' settlement papers:

- "WE HAVE TO GET KICKED OUT OF THE FIXINGS TOMORROW!! We need a 4.17 fix in 1m (low fix)."

- "You need to take a close look at the reset ladder. We need 3M to stay low for the next 3 sets . . . ."

- "This is the [book's] risk. We need low 1M and 3M libor. Pls ask [submitter] to get 1M set to 82. That would help a lot."

- "Hi Guys, We got a big position in 3m libor for the next 3 days. Can we please keep the lib or fixing at 5.39 for the next few days. It would really help. We do not want it to fix any higher than that. Tks a lot."

- "Hi mate[.] We have an unbelievably large set on Monday (the IMM). We need a really low 3m fix, it could potentially cost a fortune. Would really appreciate any help, I'm being told by my NYK [counterparts in New York] that it's extremely important. Thanks."

- "I really need a very very low 3m fixing on Monday—preferably we get kicked out. We have about 80 yards [billion] fixing for the desk and each 0.1 [one basis point] lower in the fix is a huge help for us. So 4.90 or lower would be fantastic."

83. The documents revealed by the investigation also confirm that the Libor submitters regularly altered Barclays' USD Libor reports based on the traders' requests. For example, on December 19, 2006, a Barclays trader sent an email to a Barclays submitter with the subject line, "3m Libor," asking, "Can you pls [please] continue to go in for 3m Libor at 5.365 or lower, we are all very long cash here in ny." The submitter asked "How long . . . ?" The trader replied "Until the effective date goes over year end (i.e. turn drops out) if possible." The submitter replied "Will do my best sir." On December 19, 20, and 21, 2006, Barclays' 3-month USD Libor submissions were 5.37%, 5.37%, and 5.375%, respectively.

84. On December 21, 2006, the submitter created an electronic calendar entry stating, "SET 3 MONTH US$ LIBOR LOW!!!!!!" that was scheduled to begin on December 22, 2006, at 9:00 a.m. and continue until January 1, 2007, at 9:30 a.m. On December 22, 2006, and the subsequent trading days through the end of the year, Barclays' 3-month USD Libor submissions were 5.36%, 5.365%, 5.35%, and 5.36%, respectively.

85. By way of further examples where the submitters directly agreed to make false submissions:

- "For you . . . anything. I am going to go . . . 92.5. It is difficult to go lower than that in threes. looking at where cash is trading. In fact, if you did not want a low one I would have gone 93 at least."

- "Always happy to help, leave it with me, Sir."

- Trader C: "The big day [has] arrived . . . . My NYK are screaming at me about an unchanged 3m libor. As always, any help wd be greatly appreciated. What do you think you'll go for 3m?" Submitter: "I am going 90 altho[ugh] 91 is what I should be posting." Trader C: "[W]hen I retire and write a book about this business your name will be written in golden letters." Submitter: "I would prefer this [to] not be in any book!"

- Submitter: "Hi All, Just as an FYI, I will be in noon'ish on Monday . . . ." Trader B: "Noonish? Whos going to put my low fixings in? hehehe." Submitter: "[X or Y] will be here if you have any requests for the fixings." Confirming the requests did not go unheeded, Barclays' 3-month USD Libor submission on March 13, 2006, was 4.90%, which was tied for the lowest rate submitted.

- Trader C: "If it's not too late low 1m and 3m would be nice, but please feel free to say 'no' . . . Coffees will be coming your way either way, just to say thank you for your help in the past few weeks." Submitter: "Done . . . for you big boy."

- On February 5, 2008, Manager B instructed Trader B to: "just tell him to keep it, to put it low." Trader B said that he had "begged" the submitter to put in a low Libor submission and the submitter had said he would "see what I can do."

86. The FSA made similar findings in a Final Notice ("Barclays FSA Final Notice") that imposed a financial penalty of £59.5 million on Barclays in accordance with section 206 of the Financial Services and Markets Act 2000. Based on the evidence it uncovered, the FSA determined Barclays was engaged in widespread and pervasive misconduct with respect to its Libor submissions. The FSA found that between January 2005 and May 2009, derivatives traders made at least 173 requests for USD Libor submissions to Barclays' submitters.

87. These manipulations were also carried out with the help of, and at the request of, other panel banks. For instance, after a trader at another bank requested a low Libor setting from

Barclays and, when the Barclays trader agreed, the trader responded: "Dude, I owe you big time! Come over one day after work and I'm opening up a bottle of Bollinger! Thanks for the Libor." Similarly, a trader from an unidentified bank requested that Barclays set its Libor quote low: "I know I'm asking for much, but ONLY if u guys care, a low 3m libor would be great…anywhere below 5.35…thanks dude." The FSA found that between February 2006 and October 2007, derivatives traders made at least 63 requests to external traders with the aim that those traders would pass on the requests for USD Libor submissions to their bank's submitters.

88. According to the FSA's findings, at least 14 derivatives traders at Barclays were involved in this manipulation, including senior derivative traders and trading desk managers. Further demonstrating the complete lack of controls, willingness to conspire, and general corruption in the system, the FSA and other investigations found this problem to extend beyond USD Libor. For instance, the FSA found that between September 2005 and May 2009, derivatives traders made at least 58 requests for Euribor submissions to Barclays' submitters (including 20 requests based on communications from derivative traders at other banks) and between August 2006 and June 2009, at least 26 requests for Yen Libor submissions were made to Barclays' submitters.

89. An independent review conducted by Anthony Salz, the former senior partner of Freshfields Bruckhaus Deringer LLP, found that Barclays developed a win-at-all-costs culture that laid the foundation for Barclays' misconduct in the Libor scandal. The Salz Review quoted Alistair Darling, the former Chancellor of the Exchequer: "Quite clearly, there was a culture here that tolerated—if it didn't encourage—this sort of behaviour."[15]

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[15] *Salz Review*, *An Independent Review of Barclays' Business Practice*s, ¶ 3.20 (Apr. 2013).

B. <u>Facts Made Public by UBS's Settlements</u>

90. On December 19, 2012, UBS announced a settlement with numerous regulators under which it would pay over $1.5 billion in fines (including $400 million to the DOJ) and have its Japanese subsidiary plead guilty to felony wire fraud and pay a $100 million fine. The investigations concluded that UBS's managers were well aware of and "actively involved in UBS's attempts to manipulate LIBOR and EURIBOR submissions." The FSA found a "total disregard for proper standards by these Traders and Brokers," which was "clear from the documented communications in which particular individuals referred to each other in congratulatory and exhortatory terms such as 'the three muscateers [sic],' 'superman,' 'be a hero today,' and 'captain caos [sic].'"

91. In its own corporate statement commenting on the settlements with U.S. and U.K. regulators, UBS conceded that "employees at the bank colluded with employees at other banks and cash brokers to influence certain benchmark rates . . . ." and that UBS personnel gave "inappropriate directions to UBS submitters" that were designed to misrepresent the bank's financial condition.[16]

92. Under the non-prosecution agreement, UBS agreed to admit to a Statement of Facts ("UBS SOF") detailing its manipulation of Libor and other benchmark interest rates. The statement revealed that UBS had *no* systems, controls, policies, or procedures governing its Libor submissions. *No* formal training was even given to those responsible for making the submissions. It was not until August 2008 that UBS tried to enact such procedures—but even then they did not address the inherent conflicts of interest in mixing trading and submission resources.

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[16] Press Release, UBS, *UBS Board of Directors authorizes settlements of LIBOR-related claims with US and UK authorities; Swiss regulator to issue order* (Dec. 19, 2012).

93. On December 11, 2012, the U.K. Serious Fraud Office arrested three individuals: Thomas Hayes, who had worked as a trader for Defendants UBS and Citigroup, among others, and Terry Farr and Jim Gilmour, both employees of brokerage firm RP Martin Holdings Ltd. It was reported that UBS fired 24 employees in connection with the investigation of its Libor manipulation.

94. The same day UBS announced its settlement with regulators, the DOJ's criminal complaint against former senior UBS traders Hayes and Roger Darin was unsealed. Hayes and Darin were charged with conspiracy to commit wire fraud. Hayes was also charged with price fixing in violation of the Sherman Act:

> In or about May 2009, in the Southern District of New York and elsewhere, TOM ALEXANDER WILLIAM HAYES, the defendant, and his co-conspirators, including an employee at a major financial institution, and others known and unknown, engaged in a combination and conspiracy in unreasonable restraint of interstate and foreign trade and commerce in violation of Section 1 of the Sherman Act. The aforesaid combination and conspiracy consisted of an agreement, understanding, and concert of action among HAYES and his co-conspirators, the substantial terms of which were to fix Yen LIBOR, a key price component of Yen LIBOR-based derivative products.

Hayes-Darin Complaint at 3.

95. As with Barclays, the investigative materials confirm that the panel banks were manipulating their Libor submissions in a coordinated way to line their own pockets and to make themselves appear healthier than they really were. The FSA's Final Notice states "UBS sought to manipulate Libor and Euribor in order to improve the profitability of trading positions."[17] The CFTC reached the same conclusion, and also found that UBS worked with at least four other

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[17] *See* UBS FSA Final Notice ¶ 15b.

panel banks to make false submissions, and induced at least five interdealer brokers to disseminate false information or otherwise influence other panel banks' submissions."[18]

96. The FSA concluded that UBS "acted improperly" in making false Libor submissions. As summarized by the FSA:

> In reaction to increased media scrutiny of the financial standing of and banks' LIBOR submissions during the financial crisis, UBS directives to its LIBOR submitters intended to: 'protect our franchise in these sensitive markets' . . . . These directives changed over time, but for a significant part of the period from at least 17 June 2008 to at least December 2008, ***their purpose was to influence UBS's LIBOR submissions to ensure that they did not attract negative media comment about UBS's creditworthiness***.

97. Similarly, the CFTC concluded that, from August 2007 through mid-2009, UBS managers directed that the bank's USD Libor submissions be artificially suppressed so as to "***place UBS in 'the middle of the pack' of panel bank submissions*** . . . . [T]hese directions, at times, caused UBS's U.S. Dollar LIBOR and other benchmark submissions to be knowingly false."

98. The decision to lower submissions was memorialized in an August 9, 2007 email from the Head of Asset and Liability Management to the Manager of the Derivatives Trading Desk that submitted the majority of UBS's Libor contributions, and others: ***"[I]t is highly advisable to err on the low side with fixings for the time being to protect our franchise in these sensitive markets.*** Fixing risk and [profit and loss] thereof is secondary priority for now." The next day, UBS dropped its overnight submission 50 basis points.

99. Consistent with this new practice, a UBS derivatives trader advised a USD Libor submitter that, as to UBS's Libor contribution that day, the "aim should really be to be on the

[18] *See* Press Release: PR6472-12, U.S. Commodity Futures Trading Commission, *CFTC Orders UBS to Pay $700 Million Penalty to Settle Charges of Manipulation, Attempted Manipulation and False Reporting of LIBOR and Other Benchmark Interest Rates* ("CTFC Press Release") (Dec. 19, 2012).

lower side of range." When the submitter described his intended submission, the derivatives trader responded, "this seems probably a tad low right now, but recon [sic] that's what we should try to be," and added, "we just don't want to give the market a wrong impression . . . . so therefore don't want to be on the highs of libors." Later that day, before leaving for vacation, the submitter reminded his replacement to "[p]lease remember to err on the low side." A month later, on September 5, 2007, the USD Libor submitter informed a senior manager in the Investment Bank: "we are fixing on the low side of all other banks in the libor panel in the 4-12 mo period by several bps . . . . [As a] bank we are erring on the low side."

100. Traders understood that this direction came from UBS's senior management. In a September 5, 2007 electronic chat, for instance, a trader complained about UBS's low Libor submissions, stating that "***all senior management . . . want to show the world we are the strongest bank with loads of liquidity.*** We'd lend at 0 US!"

101. In June 2008, a UBS Senior Manager instructed USD Libor submitters to lower their submissions over the next three days "to get in line with the competition." UBS's 3-month USD Libor submissions immediately dropped 5 basis points to the "middle of the pack."

102. Internally, some employees questioned the directive to report false Libor submissions. In one 2008 internal exchange via electronic chat, a UBS employee noted that "Libors are currently even more fictitious than usual." The first UBS employee asks, "isn't Libor meant to represent the rates at which banks lend to each other?" The response: ***"it's a made up number"*** that the panel banks were underreporting at the time "to not show where they really pay in case it creates headlines about . . . being desperate for cash." Or as one UBS senior manager explained the reason for UBS's "middle of the pack" directive: ***"the answer would be***

'because the whole street was doing the same and because [UBS] did not want to be an outlier in the Libor fixings, just like everybody else.'"

103. As with Barclays, recently released materials show that the bank was also manipulating its submissions to directly line its own pockets. For instance, in reference to USD Libor, a UBS trader in Connecticut emailed that the submitting office had "only one mission . . . We need 3mo Libor set low."

104. The corrupt nature of the rate-submission process is also seen in how rates other than USD Libor were manipulated. Recently revealed emails show traders asking for JPY submitters: "Can we pls go for lower Libors tonight, across all tenors," and "hi . . . can we go low 1m and 3m again pls." Like Barclays, the evidence shows the submitters responded favorably writing "will do" and "we can try." The FSA found that UBS traders "routinely" made requests of UBS's Libor submitters to adjust submissions to benefit UBS trading positions, including "more than 800 documented Internal Requests" to manipulate JPY Libor and "more than 115 Internal Requests" to manipulate other currency-denominated Libor, including USD Libor. The FSA also found that UBS "colluded with interdealer brokers to attempt to influence the JPY Libor submissions of other banks" and were in "regular contact" with at least four other banks.

105. According to the Japanese FSA, while employed by UBS, Thomas Hayes "attempted to pressure colleagues and employees at other banks involved in the rate-setting process for the Tokyo Interbank Offered Rate, or Tibor." For example, UBS admitted that on March 31, 2009, Trader-1 (identified in the press as Hayes)[19] "**asked Broker C to help**

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[19] A press report identifies the Senior Yen Trader as Hayes. *See* David Enrich, *Rate-Rig Spotlight Falls on 'Rain Man'*, Wall St. J., Feb. 8, 2013, http://online.wsj.com/article/SB10001424127887324445904578285810706107442.html

influence 9 of the 16 banks by convincing them to lower their LIBOR submissions from the previous day, thus lowering the resulting 1-month and 3-month Yen LIBOR fix."

106. In December 2012, UBS Securities Japan Co., Ltd. , the entity where Hayes worked, agreed to plead guilty to one count of wire fraud, 18 U.S.C. § 1343, for secretly manipulating JPY Libor and Tibor. UBS Securities Japan admitted in its plea that false and misleading Libor submissions were "material" from the perspective of counterparties to financial transactions.

107. On June 18, 2013, the U.K. Serious Fraud Office charged Hayes with eight counts of conspiracy to defraud. According to a June 21, 2013 *Wall Street Journal* article, each of the eight charges accuse Hayes of "dishonestly seeking to manipulate [Libor] . . . with the intention that the economic interests of others would be prejudiced and/or to make personal gain for themselves or another." In addition, the charges allege that Hayes conspired with employees at eight banks and interdealer brokerage firms, as well as with colleagues at UBS and Citi. The banks include JPMorgan, Deutsche Bank, and RBS. In January 2013, Hayes sent a text message to the *Wall Street Journal* stating "this goes much higher than me."

108. UBS has suspended employees for their involvement in manipulating Libor, including Yvan Ducrot, who was the co-head of UBS's rates business. Holger Seger, the global head of short-term interest rates trading at UBS, was likewise suspended by UBS in connection with international probes and ultimately left his position in April 2012.

109. Also similar to Barclays, the UBS evidence shows that this corruption spread across banks, as UBS traders are seen corresponding with traders at other banks (identified only as "Bank B" and the like in the released materials) along the lines of "if you could ask your guys to keep 3m low wd be massive help," "real big favour to ask, could you try for low 6m fix today

pls wld be most appreciated," and "I need you to keep it as low as possible." As with the internal corruption, the responses at the other (unidentified) banks would be favorable: "will try my best . . . hows u ? ? ?" and "ill try and push a few fictitious offers and this mg see if that helps."

110. UBS's employees were richly rewarded for their rate-rigging efforts. For example, two traders whose positions depended on Libor rates engaged in wash trades (*i.e.*, risk-free trades that cancelled each other out and which had no legitimate commercial rationale) to gin up "corrupt brokerage payments . . . as reward for their efforts" to manipulate the submissions. In a 2008 phone conversation recently detailed by the FSA, a UBS trader promised the UBS broker to do "one humongous deal with you" if the JPY Libor rate was kept "as low as possible." The trader went on: "I'll pay you, you know, 50,000 dollars, 100,000 dollars . . . whatever you want . . . I'm a man of my word." UBS made "corrupt payments of £15,000 per quarter to Brokers to reward them for their assistance" in rigging Libor.

C. <u>Facts Made Public by RBS's Settlements</u>

111. RBS also has admitted to wide-ranging rate-setting misconduct as part of settlements with multiple government authorities. RBS's CEO stated in advance of the settlement that the bank's Libor-related misconduct "is a deeply regrettable thing . . . . the sort of thing the industry has to put behind it." Similarly, Johnny Cameron, RBS's former Chairman of Global Banking and Markets, stated before British Parliament that Libor manipulation involved ***"a cartel of people across a number of banks who felt they could fix it."*** RBS's primary regulator, the FSA, found that RBS's Libor submissions process suffered from pervasive conflicts of interest that undermined the integrity of its submissions.

112. RBS's USD Libor submissions were in the bottom half of the panel banks more than two-thirds of the time. That RBS was reporting below-median borrowing costs throughout the Relevant Period is remarkable given the depth of RBS's financial problems at the time.

Despite mounting concern about RBS's stability in September 2008, the bank's Libor submissions only briefly exceeded their 2007 peak.

113. RBS delegated responsibility for its daily Libor submissions to fixed-income traders whose "bonuses were linked in part to the profit and loss ('P&L') of their money market trading books." This gave RBS's traders significant incentives to falsify their Libor submissions to influence profits on the bank's own positions. The FSA concluded that the risk traders would alter their Libor submissions to suit their trading strategies "crystallized with respect to RBS's JPY, CHF, and USD LIBOR submissions."

114. Emails, instant messages, and telephone transcripts recently made public confirm that RBS's employees knew that ***"people are just setting Libors to suit their books"*** and ***"it's just where you've got your fixing really."*** RBS FSA Final Notice ¶ 71 (emphasis in original). That is, the submissions were set only in relation to what would make RBS the most money. One submitter acknowledged that ***"I set a rate to benefit my interest as a Money Market trader."*** *Id.* (emphasis in original). According to telephone transcripts obtained by *Bloomberg*, Paul Walker, who headed RBS's money-markets trading and was responsible for its USD Libor submissions, summed up his views in call with another trader: "Libor is what you say it is."[20] Walker was fired in the months before RBS's settlement with regulators.[21]

[20] Liam Vaughan & Gavin Finch, *Secret Libor Transcripts Expose Trader Rate-Manipulation*, Bloomberg, Dec. 13, 2012.

[21] Lindsay Fortado, *RBS Traders Helped UBS's Hayes with Libor Bribes, Regulators Say*, Bloomberg, Feb. 6, 2013.

115. One RBS trader gloated, "[i]t's just amazing how Libor fixing can make you that much money . . . ***It's a cartel now in London***."[22] Another RBS trader responded, "Must be damn difficult to trade, man . . . . Especially [if] you [are] not in the loop."[23]

116. The FSA's Final Notice ("RBS FSA Final Notice") described specific instances where traders at RBS made fraudulent USD Libor submissions to inflate trading profits. For example, in 2007 one trader told an RBS colleague "I've got massive fixing in ones, so I said to [the trader] I just want the really, really low ones." The reference to "massive fixing" was to a $4 billion borrowing facility RBS had that was set to fix at the time the requests were made. RBS's submissions for 1-month USD Libor dropped, just in time for RBS's "massive fixing." The trader was unsatisfied, complaining that "we need usd libor to drop faster," and sought confirmation that "on monday, usd libor will drop 5bps."

117. A similar example took place between March 9 and March 18, 2010, when another trader explained to the submitter how he "wanted to keep [USD Libor] down because of some fixes." The submitter confirmed his understanding that "we do have some big fixes in London so suits for low libors." RBS's USD Libor submissions stayed low while five large, dollar-denominated, floating-rate transactions fixed.

118. These episodes typify how, according to the RBS FSA Final Notice, RBS's Libor submitters "inappropriately considered the impact of LIBOR and RBS's LIBOR submissions on the profitability of transactions in its money market trading books as a factor when making (or directing others to make)" Libor submissions, including USD Libor.

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[22] Andrea Tan, *RBS Instant Messages Show Libor Rates Skewed for Traders*, Bloomberg, Sept. 26, 2012 (emphasis added).

[23] *Id.*

119. As with the other settling banks, the corrupt nature of the process is further confirmed by the fact that RBS's manipulation extended beyond USD Libor. For example, on August 17, 2007, two RBS traders discussed their planned manipulation of both USD Libor and JPY Libor: "so on Monday, usd libor will drop 5bps, but jpy [Libor] will only follow suit a few days later." As this exchange demonstrates, the same individuals were often involved in manipulating Libor across different currencies.

120. *Bloomberg's* December 13, 2012, article entitled "Libor Transcripts Expose Rate-Rigging With Police Nearby" recites transcripts of instant messages and telephone conversations among RBS's traders agreeing to rig Libor. For example, *Bloomberg* reviewed a transcript of an instant message discussion held on December 3, 2007, wherein Jezri Mohideen, then RBS's head of JPY products in Tokyo, instructed colleagues in the United Kingdom to lower the bank's six-month Libor submission that day, ordering "'We want lower Libors . . . . Let the money market guys know." Will Hall, a trader in London, confirmed, "Sure, I'm setting." Mohideen replied, "Great, set it nice and low."

121. Hall was also named in an affidavit filed by a Canadian Competition Law Officer in Libor-related proceedings in Canada. The affidavit sought orders requiring RBS and other banks[24] to produce documents in connection with an inquiry concerning whether the banks conspired to "enhance unreasonably the price of interest rate derivatives from 2007 to March 11, 2010; to prevent or lessen, unduly, competition in the purchase, sale or supply of interest derivatives from 2007 to March 11, 2010; to restrain or injure competition unduly from 2007 to March 11, 2010; and to fix, maintain, increase or control the price for the supply of interest rate derivatives from March 12, 2010 to June 25, 2010."

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[24] Those banks include HSBC, Deutsche Bank, JPMorgan, and Citi.

122. According to the affidavit, Hall colluded with other traders to manipulate JPY Libor. Other traders at RBS have been implicated in the Libor scandal, including Brent Davies, another trader in London who, like Hall, was named in the Canadian Competition Law Officer's affidavit for manipulation of JPY Libor.

123. Further details on the rigging of JPY Libor have been revealed in a Singapore wrongful termination lawsuit. In that case, Tan Chi Min, former head of delta trading for RBS's global banking and markets division in Singapore (who worked for RBS from August 12, 2006 to November 9, 2011), was terminated over accusations that "he tried to improperly influence the bank's rate setters from 2007 to 2011 to persuade them to offer Libor submissions that would benefit his trading positions." According to Tan, however, it was acceptable at RBS for traders to attempt to influence Libor submissions. Tan further alleges that his manager, Todd Morakis, confirmed to him around October 2011 that "the practice of requesting to change the rate Libor is common in every rate setting environment in the banking industry."

124. RBS was charged with violating the Sherman Act due to its manipulation of JPY Libor. In a deferred prosecution agreement filed on February 6, 2013, RBS acknowledged and agreed that the DOJ will file a two-count criminal information in the United States, alleging "one count of ***price-fixing***, in violation of the Sherman Act, Title 15, United States Code, Section 1." RBS Deferred Prosecution Agreement ("DPA") (emphasis added). As part of that agreement, RBS "admits, accepts, and acknowledges that it is responsible under United States law for the acts of its officers, directors, employees, and agents as charged in the Information, and as set forth in the Statement of Facts." RBS DPA ¶ 2.

125. RBS agreed that by colluding to manipulate JPY Libor, RBS colluded to fix the price of Libor-based instruments because JPY Libor is a component of price of Libor-based instruments:

> Traders, former traders, and/or submitters at competing financial institutions, including RBS, agreed to coordinate and in fact coordinated with regard to Yen LIBOR submissions, causing the manipulation of the LIBOR reference rate on certain occasions. Because Yen LIBOR was a pricing component of derivatives contracts held by the financial institutions, the traders benefited from this agreement by affecting the profitability of the contracts on particular settlement dates.

RBS SOF ¶ 82.

126. On April 12, 2013, the DOJ charged RBS with one count of "price-fixing" in violation of Section 1 of the Sherman Act. RBS admitted that it was responsible for the following acts, as charged in the information:

> ROYAL BANK OF SCOTLAND PLC, through its employees, and its co-conspirators, engaged in a combination and conspiracy in unreasonable restraint of interstate and foreign commerce. The aforesaid combination and conspiracy consisted of an agreement, understanding and concert of action among the Defendant and its co-conspirators, the substantial terms of which were to fix the price of Yen LIBOR-based derivative products by fixing Yen LIBOR, a key price component of the price thereof, on certain occasions.
>
> In violation of Title 15, United States Code, Section 1.

127. In its settlements, RBS agreed that its JPY Libor price-fixing conspiracy lasted from at least as early as February 2007 through 2010. *See* RBS SOF ¶ 43; *see also* RBS FSA Final Notice ¶ 9 ("Between February 2007 and June 2010, RBS, through two of its Derivatives traders, colluded with Panel Banks and Broker Firms in relation to JPY and CHF LIBOR submissions").

128. RBS employees have been disciplined or dismissed for their involvement in rigging Libor. For example, Andrew Hamilton, a former investment advisor at RBS in London,

was dismissed by RBS on October 21, 2011. "In total, the misconduct involved at least 21 individuals at RBS, at least one of whom was a Manager." RBS FSA Final Notice ¶ 109.

D. <u>Defendants' Motives to Manipulate Libor</u>

129. As confirmed by the settlement materials described above, Defendants were motivated by the direct desire to line their own pockets by way of their own exposure to interest-rate risk. An academic study by UCLA economics professor Connan Snider and University of Minnesota economics professor Thomas Youle, discussed further below, concludes that bank portfolio exposure to Libor is a "source of misreporting incentive." That is, by manipulating Libor, Defendants were able to control how much they were paying out to their own counterparties and affect the value of other instruments that could be traded.

130. One direct impact of suppressing Libor for a panel bank would be that it would have to pay less interest on its own portfolio. Defendants had "unbalanced" portfolios, meaning they often stood to pay more on floating-rate instruments than they stood to receive on floating-rate instruments. Suppression of Libor, then, would save the panel banks billions. For example, according to Snider and Youle, JPMorgan reported significant exposure to rising interest rates in 2009, stating that if interest rates increased by 1%, it would lose over $500 million in revenue.

131. As of September 30, 2008, Deutsche Bank calculated it could gain or lose €68 million ($87.3 million) for every basis point of change in the spread between Libor and Euribor, and had similar exposure to changes in the Libor "yield curve" (the relationship between short- and long-term rates).[25] Deutsche Bank reportedly earned more than $650 million in profit during 2008 from trades tied to Libor because Libor was low.

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[25] Jean Eaglesham, *Bank Made Huge Bet, and Profit, on Libor*, Wall St. J., Jan. 9, 2013.

132. Citibank's 2007 Annual Report calculated that the bank would profit between $540 and $837 million from a 1% decrease in interest rates. In 2009, Citibank reported it would make $936 million in net interest revenue if rates would fall by 25 basis points per quarter over the next year and $1.935 billion if rates fell 1%.

133. Bank of America's 2007 Annual report estimated that a 1% drop in USD interest rates would yield a profit of more than $800 million.

134. In addition to a short-term profit motive, Defendants were also motivated to understate their borrowing costs to avoid negative publicity, particularly as the financial crisis that began to unfold in 2007 brought the banks under increasing scrutiny about their liquidity and creditworthiness. The BBA published the rates reported by every panel bank. If a panel bank's published rate revealed that its peers were charging it higher rates than were being charged to the other banks, this would signal that that bank was thought to be less creditworthy and riskier. Therefore, Defendants had a motive to falsify the rates that they submitted to give the appearance that their funding costs were lower than they actually were, as to portray to the market a (false) appearance of financial health despite the deteriorating condition of themselves and the marketplace.

135. The business press focused on high USD Libor submissions as a sign of distress. Such publicity increased Defendants' motivation to coordinate and lower their submissions. As noted above, this happened to Barclays in September 2007. As another example, an April 23, 2008 Société Générale report questioned the strength of RBS, and noted that RBS had left itself "no capital headroom," and recommended shareholders not invest further. Later reports noted the "loss of confidence in the bank's ability to continue to operate as a private sector p*layer* . . . In this instance, the shares could have very limited value, if at all."

136. These motives were not just reason to submit misleadingly low reports, but to do so through collusion. A single bank's "low" submission may not move the published rate far enough for the banks to make their ill-gotten gains—and may have been excluded from the calculation as an "outlier." And the only way for every Defendant to appear financially strong through low Libor submissions without drawing unwanted media and regulatory attention was for all Defendants to collude to suppress as a pack. That is because, on the one hand, a bank that submits Libor rates that are above the pack signals its relative weakness and illiquidity to the media and market. As Barclays acknowledged, a bank submitting too high risked sticking its "head above the parapet," which could get it "shot" off by the financial press. Barclays SOF ¶ 43. At the same time, a bank that artificially submitted rates that were noticeably lower than the other panel banks would also risk attention from the media or government regulators that could lead to exposure of its illicit submissions.

137. Absent collusion it would have been in the unilateral self interest of an individual bank to report that the other banks were artificially suppressing their Libor submissions, once the bank learned that was occurring. Such a report would have increased the perceived integrity of the reporting bank, while bringing into serious question the integrity and the financial strength of the banks that were providing false submissions—in other words, such a report would have conferred a significant competitive advantage upon the reporting bank. Because of their collusion, however, no bank reported on any other, meaning that investors like The City of Philadelphia was harmed by this failure to seek an individual competitive advantage.

E. <u>Statistical Evidence of Consistent and Uniform Suppression</u>

138. With the clarity the above evidence has brought, numerous statistical analyses of Libor can be and have been conducted. No matter how the data is sliced, the conclusion is the same: During the Relevant Period, there is a consistent gap between the actual behavior of USD

Libor at the time, and what one would expect when comparing Libor to the behavior of other benchmark measurements both before and after the Relevant Period. Because of the turbulence created by the financial crisis, it was not clear at the time that this gap was the result of intentional fraudulent conduct by Defendants, and certainly was not clear it was the result of collusive conduct. At the same time, the panel banks were falsely assuring the public of the integrity of the Libor rate-setting process. But with the now-public revelations discussed above, these statistical anomalies confirm that USD Libor was being continually, intentionally, and artificially suppressed.

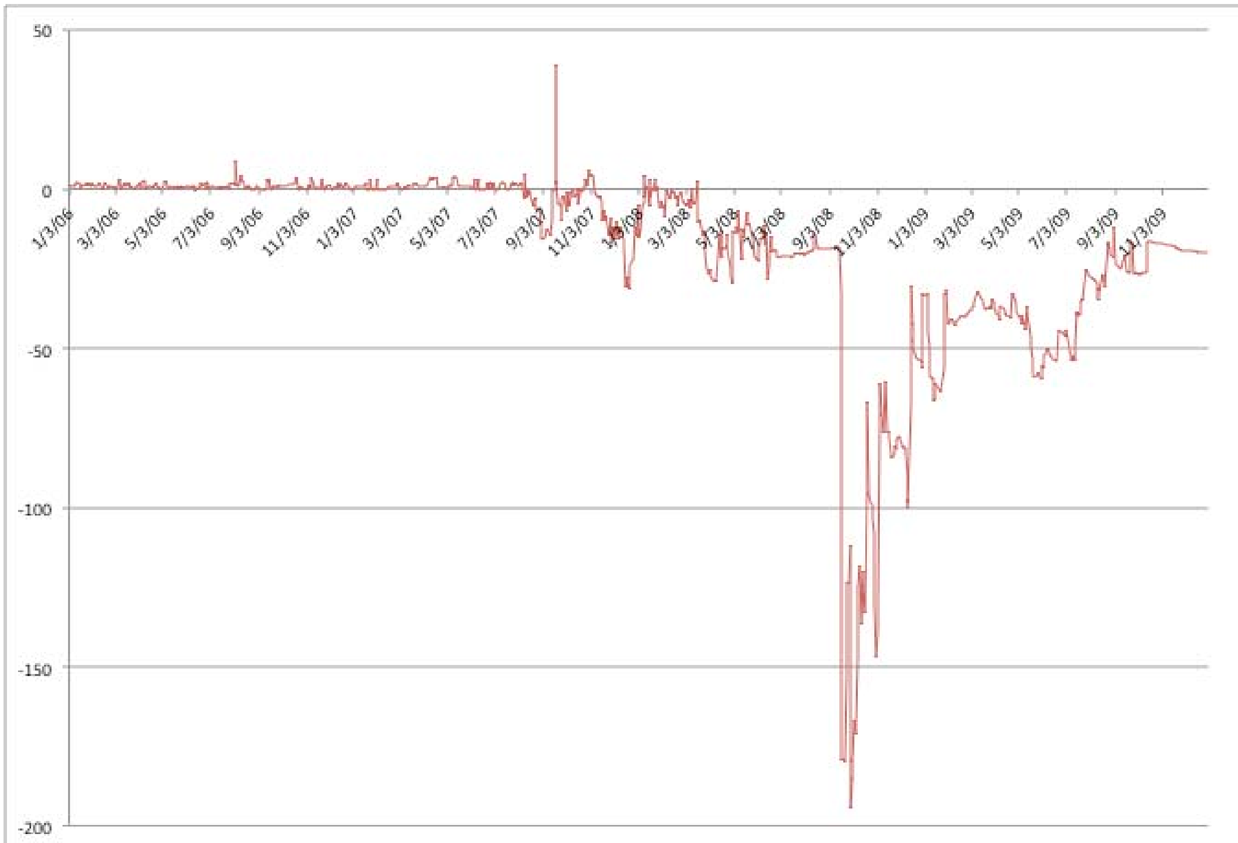
139. The statistical evidence also demonstrates that Defendants conspired to suppress Libor throughout the Relevant Period. For example, the Eurodollar study, discussed below, shows anomalous divergences during this period between the Eurodollar benchmark and Libor submissions. Those divergences are unprecedented before and after this period and not explainable by market fundamentals. Before and after this period, Libor and the Eurodollar benchmark were very closely correlated. During this period, however, Defendants' Libor submissions were, on average, approximately 29.4 basis points lower than the Eurodollar benchmark ("Eurodollar spread"). In addition, Defendants' patterns of divergence from the Eurodollar benchmark were very similar to each other during this period, as every Defendant had an average Eurodollar spread within 6 basis points of each other. As many market participants observed, Defendants suppressed as a pack during this period. This statistical evidence shows collusion because all Defendants were artificially suppressing Libor in common but unpredictable ways that did not correspond to the Libor definition, or track market fundamentals, even though their submissions were supposed to be confidential.

1. Evidence from comparing Libor's movements to those in the similar Eurodollar deposit rate

140. Like Libor, Eurodollar deposit rates published by the Federal Reserve Bank of New York reflect the cost at which Defendants and other banks lend dollars to one another in the London interbank market. The Federal Reserve's data are less susceptible to manipulation because they are based on polls of a larger sample of banks.

141. As can be seen in Figure A below, USD Libor and the Federal Reserve Eurodollar rates historically moved in lockstep—until the outbreak of the financial crisis in August 2007. The Federal Reserve's reported Eurodollar rates were consistently above Libor after that point, including by an average margin exceeding 100 bps from the day Lehman Brothers filed for bankruptcy on September 15 through the remainder of 2008.

Figure A: Spread (bps) Between 3-Month Eurodollar Deposit Rate & 3-Month USD Libor



142. Figures B and C set out this same data in number of basis points, breaking out the data by panel bank. These charts short that the average spread for each Defendant was uniformly negative throughout the Relevant Period.

Figure B: Spread, 3-Month USD Libor Submissions vs. 3-Month Eurodollar Deposit Rate
August 8, 2007 through December 31, 2010

Panel Bank	**Average spread between August 8, 2007 and December 31, 2010**
Bank of America	-27 basis points
Barclays	-23 basis points
Citi	-28 basis points
Credit Suisse	-24 basis points
Deutsche Bank	-27 basis points
JPMorgan	-31 basis points
RBC	-25 basis points
RBS	-23 basis points
UBS	-26 basis points

143. As set forth in the following chart, during the two-week period following the bankruptcy of Lehman Brothers, each Defendant dramatically increased its suppression of Libor.

Figure C: Spread, 3-Month USD Libor Submissions vs. 3-Month Eurodollar Deposit Rate September 16, 2008 through September 30, 2008

Panel Bank	**Average spread between September 16, 2008 and September 30, 2008**
Bank of America	-144 basis points
Barclays	-87 basis points
Citi	-142 basis points
Credit Suisse	-122 basis points
Deutsche Bank	-129 basis points
JPMorgan	-153 basis points
RBC	-143 basis points
RBS	-140 basis points
UBS	-141 basis points

144. Every spread during the period from September 16, 2008 to September 30, 2008 is statistically significant at the extremely high 99% confidence level. To put the magnitude of the suppression in perspective, the average Federal Reserve 3-month Eurodollar deposit rate between September 16 and September 30, 2008 was 4.81% (481 bps). Suppression by 134 bps (Defendants' average spread over this period) would thus represent a ***more than 27.9% decrease*** in the rate itself.

145. The figures in these two charts provide statistically significant evidence that Defendants suppressed Libor throughout the Relevant Period. The figures show that each Defendant falsified its Libor submissions literally hundreds of times during the Relevant Period, and that collectively the underreporting by all banks numbered in the thousands.

146. While the degree of Libor suppression is shocking, the uniformity of the spreads between Libor and the Federal Reserve Eurodollar deposit rate—during turbulent and

unpredictable times in the markets—also demonstrate that the suppression of Libor was due to collusion and coordination among Defendants.

2. Evidence from comparing the banks' USD Libor submissions to those in other currencies

147. The USD Libor Panel banks also made submissions as members of Libor panels in many other currencies. Borrowing rates will vary across these currencies to reflect the risk of fluctuations in foreign-exchange rates and other costs specific to a given currency. A bank with comparatively low borrowing costs in one currency should not, however, experience comparatively high borrowing costs in another currency. That is, a bank with a given default risk should stand in a similar position relative to its peers no matter which currency is analyzed. Accordingly, the consistent submission of relatively low USD rates alongside a relatively high submission in other currencies is evidence that the bank was strategically underreporting USD Libor.

148. Defendants' Libor submissions displayed suspicious "cross-currency risk reversals." For example, a study by Connan Snider and Thomas Youle found that Defendants Bank of America and Citi submitted relatively high JPY Libor reports during the Relevant Period even as they submitted relatively low USD Libor reports.[26] Defendants Barclays and JPMorgan exhibited similar cross-currency discrepancies. The authors found the results highly anomalous because "most of the variables that [economists] would expect to be important for pricing debt either do not vary across banks or do not vary across currencies."

[26] Connan Snider & Thomas Youle, *Does Libor Reflect Banks' Borrowing Costs?* 5-6 (Working Paper, Apr. 2, 2010).

3. Evidence from comparing the bank's submissions to movements in the credit default swap market

149. A credit default swap ("CDS") is an agreement whereby one party accepts periodic payments in exchange for a commitment to make a payment if a "credit event" occurs (such as a bankruptcy filing) in relation to the issuer of a particular debt security.

150. The price of this "insurance" (typically expressed in bps as "spreads") fluctuates with the perceived chances the credit event will occur. Similarly, in a competitive interbank lending market, the banks' borrowing costs should be related to their perceived credit risk. As one commentator observed, "The cost of bank default insurance has generally been positively correlated with LIBOR. That is, in times when banks were thought to be healthy, both the cost of bank insurance and LIBOR decreased or remained low, but when banks were thought to be in poor condition, both increased."[27] Thus, one would not expect to see banks with materially different "costs" of default insurance to report the same cost of borrowing.

151. During the Relevant Period, CDS spreads should have been an accurate predictor of Libor submissions. Because Libor is supposed to represent the interest rate at which panel banks can borrow in the interbank market, it (when accurately reported) contains both a risk-free rate component and a credit spread component that reflects the banks' creditworthiness. CDS, on the other hand, do not contain a risk-free component. As noted above, they are contracts that pay when a credit event occurs, and thus provide a direct market rate for the credit risk of the reference entity. Because the risk-free rate was extremely (and consistently) low during the Relevant Period, Libor should have almost exclusively reflected the panel banks' credit risk.

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[27] Justin Wong, *LIBOR Left in Limbo: A Call for More Reform*, 13 North Carolina Banking Institute 365, 371 (2009).

The CDS spread and Libor submission of a panel bank, then, should have closely tracked each other.

152. Yet during the Relevant Period, Defendants' Libor submissions were unnaturally clustered together despite wide variation in their CDS spreads. The discrepancy between the panel banks' Libor submissions and CDS spreads was described in a May 29, 2008 article in the *Wall Street Journal*. According to the *Wall Street Journal's* analysis, numerous panel banks caused Libor, "which is supposed to reflect the average rate at which banks lend to each other," to "act as if the banking system was doing better than it was at critical junctures in the financial crisis."[28] The article further found that "reported LIBOR rates fail[ed] to reflect rising default-insurance costs." Because CDS spreads were set by the market, thus providing an accurate measure of the panel banks' credit risk, discrepancies between CDS spreads and Libor submissions provide evidence of Libor suppression.

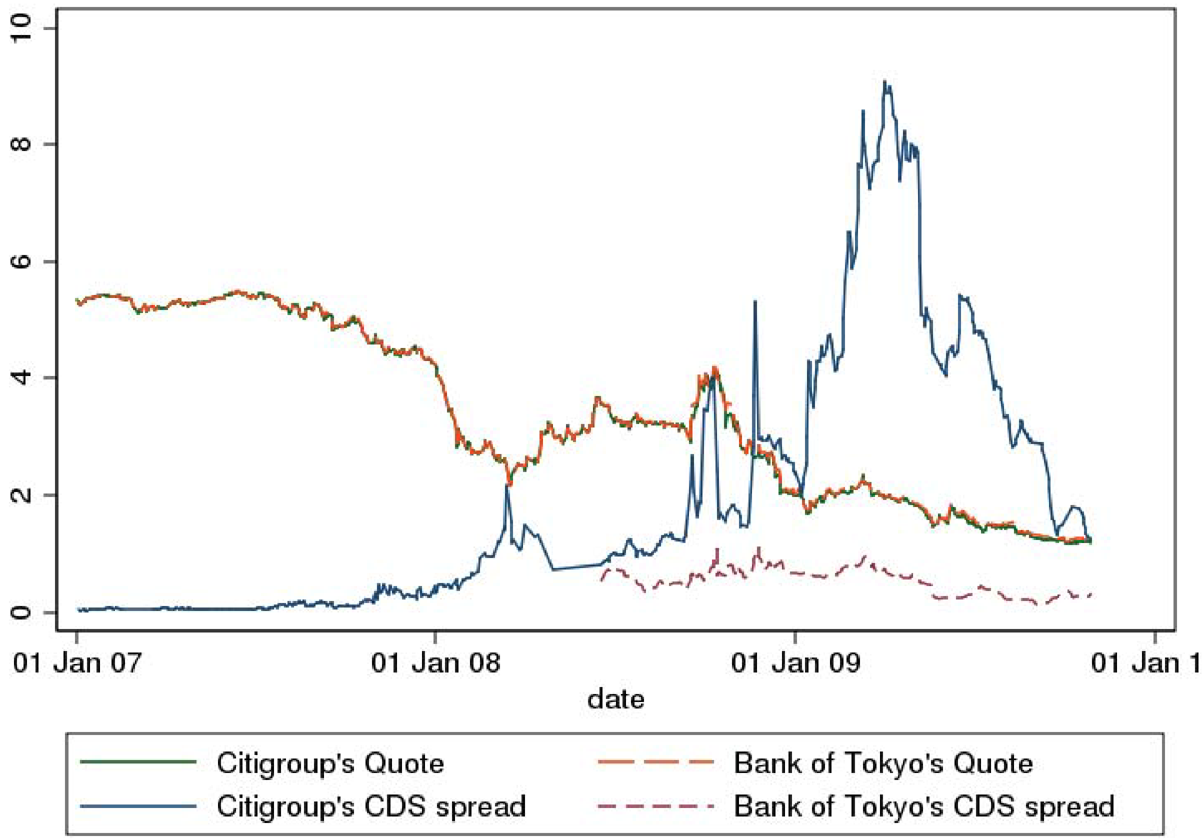
153. Further academic studies support the *Wall Street Journal's* analysis. The Snider and Youle study, cited above, concluded Libor did not accurately reflect average bank borrowing costs, its "ostensible target." Noting that "[i]n a competitive interbank lending market, banks' borrowing costs should be significantly related to their perceived credit risk," Snider and Youle posited that if Libor quotes "express true, competitively determined borrowing costs," they should "be related to measures of credit risks, such as the cost of default insurance." According to Snider and Youle, however, quotes provided by panel banks in fact deviated from their costs of borrowing as reflected in CDS spreads.

154. For example, Snider and Youle observed that Citi exhibited substantially higher CDS spreads than Bank of Tokyo-Mitsubishi during the crisis, suggesting that the market

[28] *See* Carrick Mollenkamp & Mark Whitehouse, *Study Casts Doubt on Key Rate*, Wall St. J., May 29, 2008.

perceived Citi as much riskier. Yet its USD Libor submissions tell the opposite story, as they were slightly lower than Bank of Tokyo-Mitsubishi's submissions. This is shown in the graph below:

Figure D: Citi and Bank of Tokyo's One-Year Libor Quotes and CDS Spreads



155. Evidence from the CDS market also reveals a second anomaly. As Snider and Youle explained: "Given that purchasing credit protection for a loan makes the loan risk free, one would expect [the] difference between the loan rate and the CDS spread to roughly equal the risk free rate. This corresponds to the idea that a loan's interest rate contains a credit premium, here measured by the CDS spread." For example, if a bank were to make a loan at an interest rate of 5% and then spend 3% on credit protection, the net rate of return on the loan becomes

2%. With the credit protection, that 2% difference is risk free, and should approximate the risk free rate of return prevailing in the market.

156. As the authors observed, however, Citi's Libor submissions were often "significantly below its CDS spread." This implied that "there were interbank lenders willing to lend to Citigroup at rates which, after purchasing credit protection, would earn them *a guaranteed 5 percent loss*." (Emphasis added). In other words, the credit *premium*, which of course should only constitute a portion of the loan's interest rate, was *5% larger* than the purported interest rate itself—*i.e.*, Citi's Libor quote. This discrepancy contravenes basic rules of economics, indicating that Citi was underreporting its borrowing costs to the BBA.

157. A 2012 analysis published in the *Journal of Banking & Finance* similarly found that the Libor submissions of Defendants Bank of America, Citi, JPMorgan, and UBS consistently reported below-median borrowing costs in April-May 2008 despite exhibiting relatively high CDS spreads.[29] *The Wall Street Journal* concluded in 2012 that "banks' submissions used to calculate the London interbank offered rate . . . sometimes fail to track the market's view of the credit risk posed by each firm."[30]

4. Evidence from comparing USD Libor's movements to those in other measurements of the banks' likelihood of default

158. The consulting experts for other plaintiffs in the multidistrict Libor litigation using a proprietary database provided by Kamakura Risk Information Services ("KRIS")

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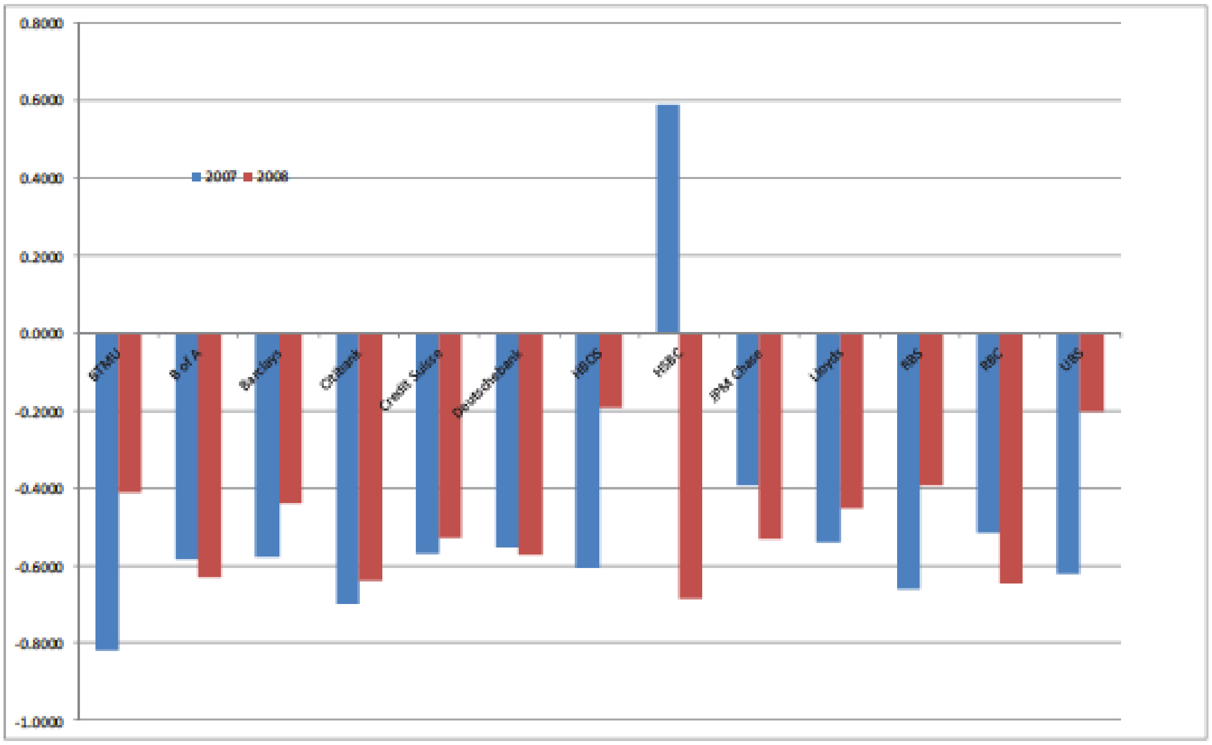
[29] Rosa M. Abrantes-Metz, *et al.*, *Libor Manipulation?*, 36 J. Banking & Fin. 136, 148 tbl.7 (2012).

[30] Jean Eaglesham, Rob Barry & Tom McGinty, *Libor Furor: Key Rate Gets New Scrutiny*, Wall St. J., Sept. 12, 2012; *see also* Jennie Bai & Pierre Collin-Dufresne, *The CDS-Bond Basis During the Financial Crisis of 2007-2009* (Working Paper Apr. 30, 2012); Alessandro Fontana, *The Persistent Negative CDS-Bond Basis During the 2007/08 Financial Crisis* (Working Paper 2009).

conducted another study concluding that the USD Libor submissions were being moved by factors other than the panel banks' borrowing costs.

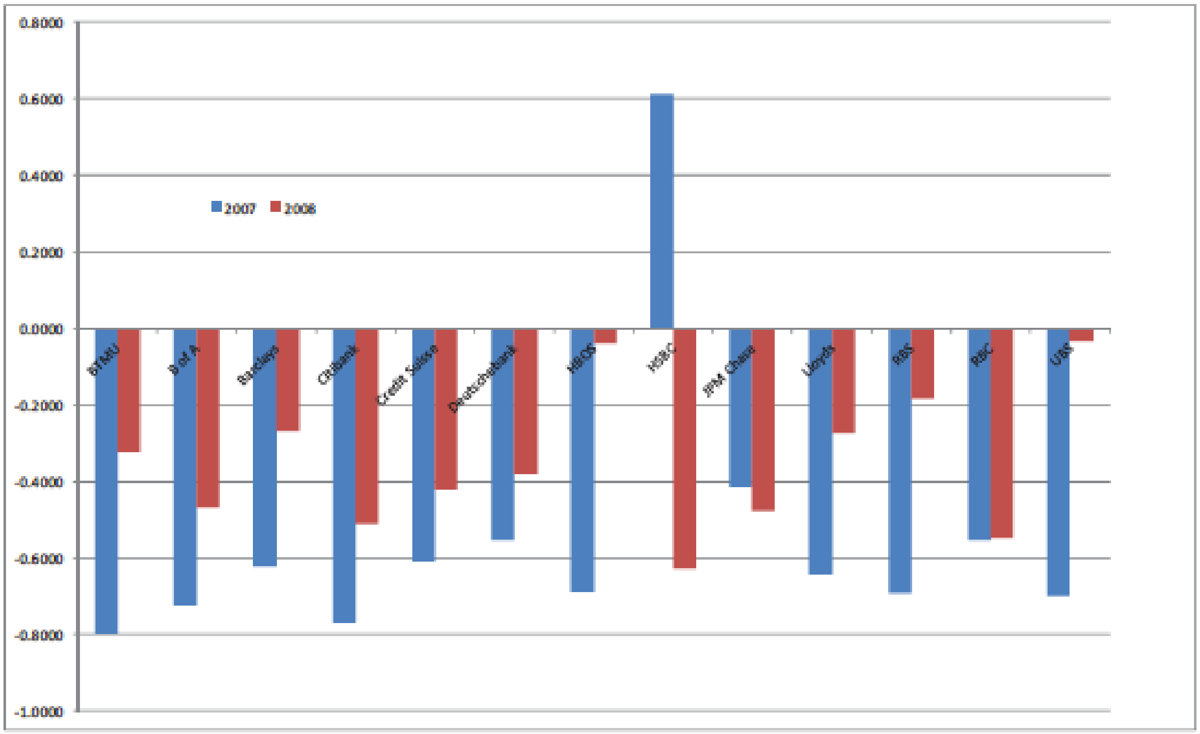
159. The KRIS data estimates each panel bank's default risk on a daily basis by applying multiple models to each bank's equity and bond prices, accounting information, the level of interest rates and other objective and observable indicators. The KRIS data measures the probability of default of a borrower. Each Defendant's borrowing costs should be positively correlated with their perceived probability of default—as a bank's objectively measured riskiness moved up during 2008, so too should its Libor submissions. To the contrary, the KRIS analysis found negative correlation—that is, as the perceived risk actually went up, the purported borrowing cost (Libor) went down.

Figure E: Correlation Coefficient Between 1-Month USD Libor Submissions and 1-Month Probability of Default



(Note: PDs are estimated daily using the reduced form model of Kamakura Risk Information Services.)

Figure F: Correlation Coefficient Between 3-Month USD Libor Submissions and 3-Month Probability of Default



(Note: PDs are estimated daily using the reduced form model of Kamakura Risk Information Services.)

5. Evidence from comparing USD Libor's movements to those in the Federal Reserve's Term Auction Facility

160. Libor suppression is also apparent in the discrepancy between Defendants' Libor submissions and the rates at which banks were borrowing from the Federal Reserve's Term Auction Facility.

161. From late 2007 to mid 2010, the Federal Reserve conducted periodic auctions in which it made secured loans. The facility extended only loans secured by acceptable collateral, which carried lower risk than the unsecured interbank borrowings measured by Libor. Thus, the banks should not have been willing to put in a bid (which required the posting of collateral) at a lower rate than its purported unsecured interbank lending rate.

162. In fact, Defendants were submitting auction bids substantially above their purported Libor borrowing rates.[31] For example, Defendants Bank of America, Citi, Credit Suisse, Deutsche Bank, JPMorgan, RBS, and UBS were all reporting USD Libor borrowing costs of up to 70 bps below the auction rate.

6. Evidence from the stability and bunching of the Libor submissions

163. As discussed above, the panel banks were not supposed to know each other's daily submissions. Thus consistent clustering would support a conclusion of manipulation and conspiratorial behavior.

164. A group of banks seeking to manipulate Libor would want to submit the lowest bids possible, without drawing attention to themselves by being outliers. By making low submissions that were among the lowest but not so low as to be excluded as being in the lowest quartile, the banks could place maximum downward pressure on Libor while at the same time deflecting potential suspicion from being too low. Accordingly, any clustering of submissions around the fourth-lowest bid would indicate that banks were acting together to drive the Libor rate downward.

165. In fact, during the Relevant Period rate submissions by Bank of America, Citi, and JPMorgan exhibited suspicious "bunching" patterns around the bottom of the second quartile. Citi and Bank of America frequently submitted USD Libor quotes that were ***identical*** to the fourth-lowest submission.

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[31] Carrick Mollenkamp, *Libor's Accuracy Becomes Issue Again*, Wall St. J., Sept. 24, 2008.

Figure G

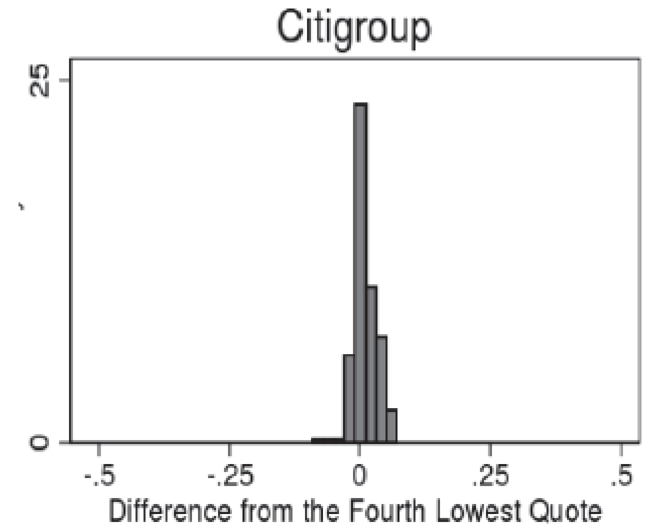


Figure H

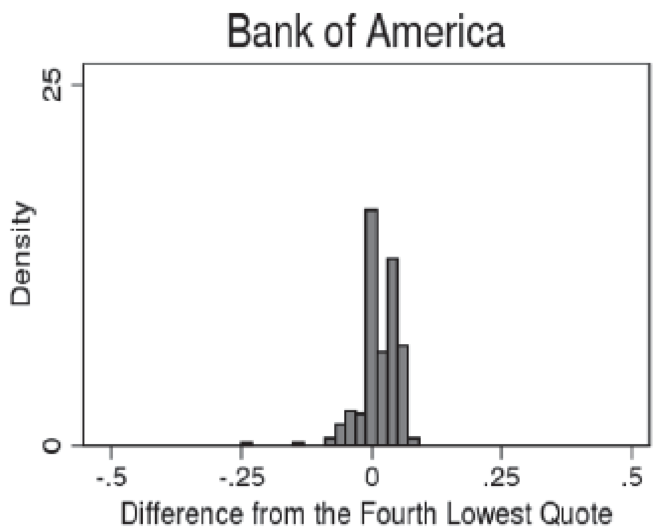
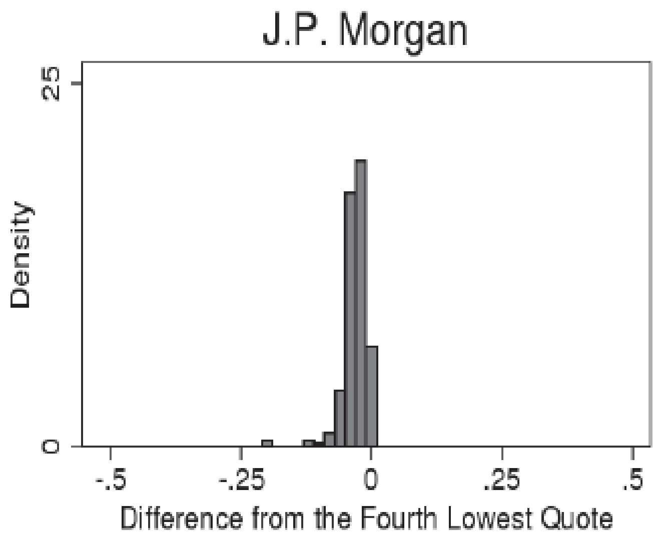
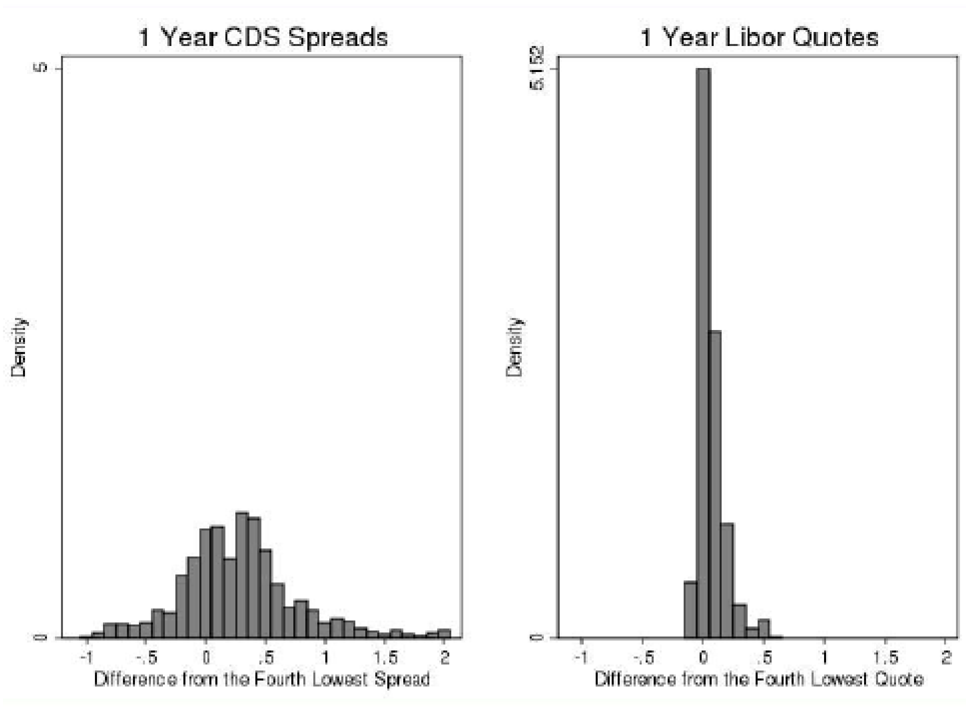


Figure I



166. Studies have found that other measures of bank creditworthiness—such as the spreads on CDS referencing each of these three banks—did not exhibit this bunching behavior during the Relevant Period. Figure I below illustrates this discrepancy with information comparing spreads on CDS referencing the panel banks with a term of one year with quotes submitted by the panel banks for one-year USD Libor.

Figure J



167. Similarly, a 2012 analysis found statistically significant evidence of non-random "joint participation" in the deciding group for USD Libor during the summer of 2008.[32] This means certain groups of banks tended to enter the deciding group on the same day at a suspiciously high frequency, providing further evidence of collusion.

7. Statistical Analysis of Management Directives Supports Collusion

168. Based on the specific information provided by regulators in the UBS settlements regarding the nature and timing of management's directives to "err on the low side" or to be "in the middle of the pack," a consulting expert in the Libor MDL examined the likelihood that UBS submitters could have complied with these directives absent collusion with the other Defendants.

169. The consulting expert looked specifically at the period beginning on or about June 18, 2008 and continuing until mid-April 2009. The consulting expert first looked at how often

[32] Abrantes-Metz, *Libor Manipulation?*, 36 J. Banking & Fin. at 144-147.

UBS's daily 3-month Libor submissions were "in the middle of the pack" during this six-month period.

170. The expert then undertook probability analysis to determine how likely it was the UBS Libor submitters could have been able to successfully target their submissions "in the middle of the pack" as often as they did absent collusion. To do this, the expert looked at relevant public information available to the Libor submitters at the time they made their submissions at around 11:00 a.m. London time. The consulting expert determined the relevant public information reasonably available to UBS Libor submitters to be: (i) prior day 3-month Libor submissions from the Panel Banks; and (ii) changes in the Federal Reserve Eurodollar deposit rate, which would have reflected changes in relevant market fundamental from the prior day, and (iii) changes in the opening and closing prices of Eurodollar futures prices from one day prior and from two days prior.

171. The expert determined that during the period of June 18, 2008 through April 14, 2009, UBS's Libor submitters were highly successful in meeting management's directive. Specifically, over this ten-month period, UBS's 3-month Libor submissions were at or within the interquartile range (the two middle quartiles of panel bank submissions that were averaged to calculate each day's Libor rates) 99.0% of the time, and were within the interquartile range (*i.e.*, not tied with the fourth lowest or thirteenth highest submission) 86.7% of the time. Further demonstrating UBS submitters' stunning ability to consistently target the actual published Libor rates despite a volatile market, the DOJ found that from June 18, 2008, and continuing for approximately the same ten-month period, UBS's 3-month Libor submissions were identical to the published Libor, and largely consistent with the published Libor in the other tenors.

172. Using probability analysis, the consulting expert then calculated the likelihood to be ***less than 1%*** that UBS could have achieved this remarkable consistency based on consideration of the prior day's interquartile range Libor panel bank submissions. The expert further determined that there was **a *less than 1%*** likelihood that UBS could have achieved its consistent record during this period based on consideration of the prior day's interquartile range Libor Panel Bank submissions and changes in the Federal Reserve Eurodollar deposit rate. The expert also determined that there was ***a less than 1%*** likelihood that UBS could have achieved its consistent record during this period based on consideration of the prior day's interquartile range Libor panel bank submissions and changes in the Eurodollar opening or closing prices from either one day prior or from two days prior.

173. As with the expert's conclusions in connection with the Eurodollar analysis above, the duration of, and the degree of successful compliance with management's specific Libor quote submission directives relative to where other panel banks' suppressed submissions fell on a daily basis further strongly support that the Libor suppression was accomplished through Defendants' collusive cooperation.

F. Additional Evidence of Defendants' Wrongdoing

174. ***As to Deutsche Bank,*** Guillaume Adolph was a derivatives trader at Deutsche Bank named in the Canadian Competition Law Officer's affidavit as a trader involved in the manipulation of JPY Libor. According to the affidavit, Trader A communicated to Adolph his trading positions, his desire for a certain movement in JPY Libor and instructions to get Deutsche Bank to make JPY Libor submissions consistent with his wishes, and Adolph agreed to do so. Deutsche Bank's manipulation of JPY Libor was part of a broader scheme to benefit its trading positions, including through suppression of USD Libor, and enabled it to make substantial ill-gotten gains.

175. Deutsche Bank was also implicated in the wrongful termination lawsuit filed by Tan Chi Min, the former head of delta trading for RBS's global banking and markets division in Singapore. Those proceedings revealed an August 19, 2007 message from Tan to a trader at Deutsche Bank stating "[i]t's just amazing how Libor-fixing can make you that much money or lose it if opposite." "It is a cartel now in London," Tan added.

176. On July 31, 2012, Deutsche Bank confirmed that certain of its employees improperly manipulated Libor. For example, Deutsche Bank discovered that Christian Bittar, the head of its money markets derivatives group, colluded with a trader at Barclays to rig Libor. As a proprietary trader, Bittar bet on Libor with the bank's own money, and was paid a percentage of his trading profits. The profits Deutsche Bank earned from these bets were substantial. According to the *Wall Street Journal*, Deutsche Bank made $654 million by betting on small changes in Libor during 2008. Bittar was suspended and eventually fired for his misconduct. Bittar was reportedly forced to give up €40 million (over $52.1 million) in deferred pay due to his involvement in the Libor scandal. Deutsche Bank has dismissed or suspended a total of seven employees due to their roles in rigging Libor.

177. As reported by *Bloomberg* on January 22, 2013, Deutsche Bank's co-CEO Anshu Jain told clients and investors during a panel discussion that "[t]he Libor sickens us all. . . . It sickens me the most of all scandals."[33] According to Jain, multiple banks were engaged in wrongdoing related to Libor.

178. BaFin, the German financial regulator, has launched an investigation into Libor manipulation by Deutsche Bank, as have regulators in the United States, Japan, and Singapore. BaFin President Elke König urged banks involved in the scandal to make "provisions for

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[33] Nicholas Comfort, *Deutsche Bank's Jain Sickened by Libor Manipulation Scandal*, Bloomberg, Jan. 22, 2013.

anticipated losses," and said the magnitude of the manipulations has rendered her speechless. On March 21, 2013, it was reported that BaFin's investigation had exposed "organisational flaws" at Deutsche Bank. BaFin's report is expected to feed into Libor-related settlement talks between Deutsche Bank and regulators in the United States and United Kingdom. Deutsche Bank recently increased the amount it has set aside for the potential legal actions it could face to approximately $781 million.

179. In recently filed criminal charges, the U.K. Serious Fraud Office alleges that Tom Hayes conspired with traders at Deutsche Bank to manipulate Libor.

180. ***As to JPMorgan,*** as discussed above, the bank had a very unbalanced exposure to USD Libor that benefitted greatly from suppressed USD Libor—and thus it is not surprising that the bank was another whose submissions were suspiciously bunched among the lowest ones.

181. Paul Glands and Stewart Wiley were derivatives traders with JPMorgan, who were named in the Canadian Competition Law Officer's affidavit as involved in the manipulation of JPY Libor. According to the affidavit, Trader A communicated to the traders his trading positions, his desire for a certain movement in JPY Libor and instructions for the traders to get JPMorgan to make JPY Libor submissions consistent with his wishes, and the traders agreed to do so. JPMorgan's manipulation of JPY Libor was part of a broader scheme to benefit its trading positions, including through manipulation of USD Libor. JPMorgan was also among the banks recently sanctioned by the Monetary Authority of Singapore for manipulating benchmark interest rates. Finally, JPMorgan was named in criminal charges recently filed by the U.K. Serious Fraud Office as one of the banks with which Tom Hayes conspired to manipulate Libor.

182. ***As to Bank of America,*** as discussed above, Bank of America had a very unbalanced USD Libor portfolio, providing it with a powerful incentive to have Libor set low. Unsurprisingly, then, as also discussed above, the bank was among those that "bunched" among the lowest submitters, and has been a repeated target of the many ongoing Libor probes.

183. On March 17, 2011, *Bloomberg* reported that Bank of America had received subpoenas from the SEC and DOJ regarding its Libor setting. Several days later, *Bloomberg* revealed that Bank of America and several other banks had been asked by regulators "to make employees available to testify as witnesses" in connection with an investigation into Libor manipulation.

184. In June 2013, it was reported that Bank of America was required by the Monetary Authority of Singapore to increase its reserves by S$ 700-800 million ($549-627 million) as a sanction for artificially manipulating benchmark interest rates. This development, in addition to Bank of America's bunching and other statistical evidence discussed above, demonstrate that it suppressed its Libor submissions during the Relevant Period.

185. ***As to Citi,*** the bunching behavior described above is particularly suspect given its serious financial problems during the Relevant Period. On November 21, 2008, for instance, the *Wall Street Journal* reported that Citi executives "began weighing the possibility of auctioning off pieces of the financial giant or even selling the company outright" after the company faced a plunging stock price. The article noted Citi executives and directors "rushing to bolster the confidence of investors, clients and employees" in response to uncertainty about Citi's exposure to risk concerning mortgage-related holdings. On November 24, 2008, *CNNMoney* wrote:

> If you combine opaque structured-finance products with current fair-value accounting rules, almost none of the big banks are solvent because that system equates solvency with asset liquidity. So at this moment Citi isn't solvent. Some argue that liquidity, not solvency, is the problem. But in the end it doesn't matter.

> Fear will drive illiquidity to such a point that Citi could be rendered insolvent under the current fair-value accounting system.

186. On January 20, 2009, *Bloomberg* reported that Citigroup "posted an $8.29 billion fourth-quarter loss," completing its worst year, and planned to split in two under CEO Vikram Pandit's plan to rebuild a capital base eroded by the credit crisis. The article further stated, "[t]he problems of Citi, Bank of America and others suggest the system is bankrupt."

187. Despite Citi's financial woes, which necessarily raised its actual borrowing costs, the bank's Libor submissions did not appreciably increase. Instead, Citi made low submissions bunched around those of other panel banks.

188. A July 2012 *CNNMoney* article posited "Barclays the biggest Libor liar? No, that may have been Citi."[34] The article observed that Pandit recently had "told analysts not to use Barclays' $450 million Libor settlement as a guidepost for what his firm might have to pay." Citing a study showing that "on average Citi understated its borrow[ing] costs by an average of 0.12 percentage points from August 2007 to August 2008," which was "50% more than the 0.08 percentage points that Barclays under report[ed] its own borrowing costs"—the article suggested Citigroup "might end up paying much more" than Barclays did.

189. Like other panel banks, there is evidence that Citi manipulated not just USD Libor, but Libor denominated in other currencies. On December 9, 2011, for example, it was reported that the Japanese Securities and Exchange Surveillance Commission ("SESC") alleged that Citigroup Global Markets Japan Inc. ("CGMJ") "employed staffers who attempted to influence" Tibor "to gain advantage on derivative trades." The SESC recommended that the Japanese prime minister and the head of the Japanese FSA take action against Citi. The

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[34] Stephen Gandel, *Barclays the biggest Libor liar? No, that may have been Citi*, CNNMoney, July 20, 2012

Commission specified that Citigroup's head of G-10 rates and a Citigroup trader were involved in the misconduct, further stating, "[t]he actions of Director A and Trader B are acknowledged to be seriously unjust and malicious, and could undermine the fairness of the markets." Moreover, the Commission added, "[i]n spite of recognizing these actions, the president and CEO . . . who was also responsible for the G-10 rates, overlooked these actions and the company did not take appropriate measures, therefore, the company's internal control system is acknowledged to have a serious problem."

190. Citigroup did not deny the SESC's findings. A Citigroup spokesperson stated, "Citigroup Global Markets Japan takes the matter very seriously and sincerely apologizes to clients and all parties concerned for the issues that led to the recommendation. The company has started working diligently to address the issues raised."

191. Citigroup later disclosed that on December 16, 2011, the Japanese FSA took administrative action against CGMJ for, among other things, certain communications made by two CGMJ traders about Tibor. The Japanese FSA issued a business improvement order and suspended CGMJ's trading in derivatives related to JPY Libor, as well as Euroyen and Yen-Tibor from January 10 to January 23, 2012. On the same day, the JFSA also took administrative action against Citibank Japan Ltd. for conduct arising out of Citibank Japan's retail business and also noted that the communications made by the CGMJ traders to employees of Citibank Japan about Euroyen Tibor had not been properly reported to Citibank Japan's management team.

192. As discussed above, Thomas Hayes was lured from UBS to Citi with a $5 million job offer. According to the Japanese FSA, Hayes proceeded to attempt to pressure colleagues and employees at other banks into manipulating Tibor. For example:

- On March 3, 2010, Hayes told a broker "i really need a low 3m jpy libor into the imm [the International Monetary Market date, which occurs quarterly on the third

Wednesday of March, June, September, and December],” and “any favours you can get with the due at [Bank C] would be much appreciated” “even if he only move 3m down 1bp.” The broker said “i’ll give him a nudge later, see what he can do” and then asked the Bank C submitter: “u see 3m jpy libor going anywhere btween now and imm?” noting “we have a mutual friend who’d love to see it go down, no chance at all?” The Bank C submitter said “haha TH by chance,” and the broker responded “shhh.”

- The Hayes-Darin Complaint notes that, the next day, Bank C’s 3-month JPY Libor submission decreased by one basis point compared to the previous day. After the Libor submissions were posted, the Bank C submitter reported back to the broker: “Libor lower ;),” and the broker responded “good work!!!!

- On May 12, 2010, Hayes told a UBS submitter: “libors are going down tonight” “because i am going to put some pressure on people.”

193. Christopher Cecere was the head of G10 trading and sales for Asia at Citibank. The Japanese FSA found that Cecere “and another Citigroup trader engaged in ‘seriously unjust and malicious’ conduct by asking bankers to alter data they submitted while setting a benchmark Japanese lending rate.”

194. Brian McAppin was Citi’s brokerage head in Japan. According to an article in the *Wall Street Journal*, the Japanese investigation found that he “overlooked” alleged attempts by traders to influence interest rates despite “recognizing these actions.”

195. As reported by *Bloomberg*, Citi has “dismissed, put on leave or suspended traders as part of the investigations” into Libor manipulation.

196. Citi’s manipulation of Libor in other currencies was part of a broad scheme to benefit its trading positions and protect its reputation, which, as shown by the facts above, included suppression of its USD Libor submissions.

197. ***As to Credit Suisse,*** in February 2012, the bank disclosed that the Swiss Competition Commission had commenced an investigation involving the bank concerning alleged collusive behavior among traders to affect the bid ask spread for derivatives tied to the

Libor and Tibor reference rates fixed with respect to certain currencies, and collusive agreements to influence these rates. In October 2012, it was reported that New York Attorney General Eric Schneiderman had issued subpoenas to nine banks, including Credit Suisse, as part of an investigation into Libor manipulation. In June 2013, it was reported that Credit Suisse was sanctioned by the Monetary Authority of Singapore for manipulating benchmark interest rates. This development and the statistical evidence discussed above—including discrepancies between Credit Suisse's Libor submissions on the one hand, and other measures of its borrowing costs, such as its probability of default and CDS spreads on the other—demonstrate that Credit Suisse suppressed its Libor quotes during the Relevant Period.

III. <u>DEFENDANTS' MISCONDUCT HARMED THE CITY OF PHILADELPHIA</u>

A. <u>The City of Philadelphia's Interest Rate Swaps</u>

198. As detailed in Exhibit A, Plaintiff entered into one or more interest rate swaps with each Counterparty Defendant. These trades were lucrative to the Counterparty Defendants, which earned substantial fees and profits in connection with the swap trades. Plaintiff should have benefited from higher USD Libor rates, for example, due to the declining credit quality of USD Libor panel banks in 2008 and afterwards.

B. <u>Defendants' Libor Suppression Altered the Performance of the Swaps</u>

199. The City of Philadelphia entered into one or more swaps with each Counterparty Defendant in which The City of Philadelphia paid fixed rates and in exchange received floating rates tied to Libor. The City of Philadelphia agreed to pay fixed rates in these swaps based on the expectation that the floating payments they would receive over the life of the contract would be calculated based on Libor submissions that conformed to the Libor definition, an accurate measure of interbank borrowing costs. Instead of receiving what it had bargained for, however, The City of Philadelphia received something worth far less. Libor did *not* accurately reflect

interbank borrowing costs and did not conform to the Libor definition but rather was artificially suppressed by Defendants' conduct. Specifically, due to Defendants' misconduct, The City of Philadelphia received artificially lowered floating-rate payments based on amounts fixed by the Counterparty Defendants.

200. In addition, for each of its swaps that The City of Philadelphia terminated, The City of Philadelphia made inflated payments due to Libor forward curves determined based on then-prevailing suppressed USD Libor rates. Defendants thus acted in bad faith to deprive The City of Philadelphia of the benefit of its bargain.

C. Defendants Breached the Terms of their Swap Contracts

201. The terms of The City of Philadelphia's swap contracts with each Counterparty Defendant are set forth in the Exhibits and are also summarized in the Counts below. The contractual relationships between The City of Philadelphia and each Counterparty Defendant followed the same pattern. The swaps in particular were documented under ISDA Master Agreements.

202. ISDA Master Agreements are market-standard agreements that provide a common set of terms to be used in a series of swaps between two parties.[35] The parties may customize the ISDA Master Agreement through use of a Schedule, which contains elections, additions, and amendments. While the ISDA Master Agreement sets the general terms of a relationship, a Confirmation is used to document a particular transaction. The Confirmation supplements and forms part of the ISDA Master Agreement between the two parties.

[35] As documented in Exhibits B-D, the Schedules to the ISDA Master Agreement with Defendant Citi specified that New York law would govern while the Schedules to the ISDA Master Agreements with Defendants JPMorgan and RBC specified that Pennsylvania law would govern.

203. Confirmations for the interest rate swaps involved here (detailed in the Exhibits) provided that the banks were to pay the "Floating Amount," calculated by a "Calculation Agent" with reference to 3-month USD Libor. Either the Confirmations or the Schedules to the ISDA Master Agreements involved here specified that each Counterparty Defendant would act as "Calculation Agent" for its interest rate swaps with The City of Philadelphia. As that term was defined, the Calculation Agent was to calculate its floating-rate payments "in good faith and in a commercially reasonable manner." Defendants breached such terms, and others, in each of their respective agreements when floating payments were calculated not based on Libor as properly calculated, but based on knowingly manipulated and suppressed Libor rates.

204. The ISDA Master Agreements also have a term requiring that each party "comply in all material respects with all applicable laws . . . to which it may be subject if failure so to comply would materially impair its ability to perform its obligations under this Agreement." Defendants breached such terms, and others, in each of their respective agreements when they violated numerous laws by manipulating, and colluding to manipulate, Libor. For example, on June 27, 2012, the DOJ stated that "[f]or years, traders at Barclays encouraged the manipulation of LIBOR and EURIBOR submissions in order to benefit their financial positions; and, in the midst of the financial crisis, Barclays management directed that U.S. Dollar LIBOR submissions be artificially lowered. For this illegal conduct, Barclays is paying a steep price."

205. UBS entered into a non-prosecution agreement with the DOJ while its subsidiary, UBS Securities Japan Co. Ltd., pleaded guilty to felony wire fraud for manipulating JPY Libor and Tibor. In addition, two senior UBS traders—Tom Hayes and Roger Darin—were charged in a criminal complaint alleging conspiracy and antitrust violations based on the same misconduct. According to Assistant Attorney General Lanny A. Breuer, "[t]he scheme alleged is epic in

scale." Breuer added that the "agreement by UBS Japan to plead guilty, the charges against individual alleged perpetrators of these crimes, and our agreement recognizing the steps being taken by UBS AG to right itself demonstrate the Justice Department's determination to hold accountable those in the financial marketplace who break the law."

206. Similarly, RBS Securities Japan Limited, pleaded guilty to felony wire fraud based on its manipulation of JPY Libor. As part of a deferred prosecution agreement, the DOJ also filed a criminal information charging RBS with wire fraud and antitrust violations for its role in manipulating JPY and CHF Libor. As discussed above, UBS and RBS engaged in the same misconduct with respect to USD Libor, and thus broke numerous laws due to their manipulation of USD Libor as well.

207. Each Counterparty Defendant's conduct also breached its implied duty of good faith and fair dealing that is a part of its contractual relationships with The City of Philadelphia. The Libor suppression allowed each Counterparty Defendant to reap windfall profits, first calculating and then paying artificially low floating rates substantially below the fixed rates owed by The City of Philadelphia. Finally, each Counterparty Defendant committed fraud-by-omission, by entering into swaps in which it would make payments based on USD Libor and then making lower payments than it should have, without disclosing that USD Libor was being and would continue to be manipulated and suppressed.

D. Defendants' Collusion Harmed Competition and Caused Antitrust Injury to The City of Philadelphia

208. The City of Philadelphia suffered antitrust injury as a result of the anticompetitive aspects of Defendants' conduct.

209. Defendants are direct competitors and separate, profit maximizing entities, who are expected to act unilaterally in the marketplace as independent centers of decision making—

all for the benefit of consumers. Defendants are expected to compete in the market, including by competing to offer more attractive terms to investors.

210. Pursuant to their agreement, however, Defendants restrained themselves from acting independently in favor of concerted action intended to maximize their financial interests in a way they could not have achieved unilaterally. Defendants' agreement jointly to restrain their conduct was intended to, and had the effect of, tampering with price structures in the market, including by directly affecting the payments due, and net payments due, under the swaps at issue in this matter. Defendants knew that their conduct would have the immediate effect of inflating the payments they would receive from investors on existing financial instruments while decreasing the payments their counterparties would receive. Rather than competing, Defendants chose to work together—and to jointly kept their scheme secret—to inflate prices and reap profits they could not otherwise have achieved.

211. Absent collusion it would have been in the unilateral self interest of an individual bank to report that the other banks were artificially suppressing their Libor submissions, once the bank learned what was occurring, and not to engage in that behavior itself. As a result of Defendants' conspiracy, however, this did not occur, and The City of Philadelphia and other investors suffered significant financial losses as a result.

212. Defendants are direct, horizontal competitors with respect to the sale of Libor-based instruments, and Libor is a central component of the price of such instruments. Thus, Defendants' anticompetitive conduct had severe adverse consequences on competition in that The City of Philadelphia's payments under the swaps were directly affected by Defendants' horizontal price-fixing and their failure to compete. As a result, The City of Philadelphia was injured in its business and property in the form of significant financial losses.

213. As the DOJ charged RBS on April 12, 2013, and RBS admitted, by colluding to fix Libor, Defendants conspired to fix the price of Libor-based instruments, which was a conspiracy "in unreasonable restraint of interstate and foreign commerce."

> From at least as early as 2007 through at least 2010, ***Defendant THE ROYAL BANK OF SCOTLAND PLC, through its employees, and its co-conspirators, engaged in a combination and conspiracy in unreasonable restraint of interstate and foreign commerce***. The aforesaid combination and conspiracy consisted of an agreement, understanding and concert of action among the Defendant and its coconspirators, the substantial terms of which were to fix the price of Yen LIBOR-based derivative products by fixing Yen LIBOR, a key component of the price thereof, on certain occasions.
>
> In violation of Title 15, United States Code, Section 1.

RBS Information (Apr. 12, 2013) (emphasis added)

214. The DOJ also charged a former UBS employee, Thomas Hayes, with violating the Sherman Act by conspiring to fix JPY Libor as a component of price of Libor-based instruments. *See* Hayes-Darin Compl. at 3 ("The aforesaid combination and conspiracy consisted of an agreement, understanding, and concert of action among HAYES and his co-conspirators, the substantial terms of which were to fix Yen LIBOR, a key price component of Yen LIBOR-based derivative products.").

215. Defendants used Libor as the floating component of price on trillions of dollars of financial instruments. Defendants' collusive manipulation of Libor therefore directly affected a component of the price of the these instruments. Thus, after entering into the interest rate swaps in question from Defendants, The City of Philadelphia performed under instruments whose value was reduced by Defendants' collusive suppression of a component of their price.

216. As noted above, the DOJ charged RBS with price-fixing in violation of the Sherman Act and RBS admitted to the underlying facts. By letter dated March 22, 2013, the Department of Justice notified entities that entered into transactions with RBS that they may be

victims of and may have been harmed by an antitrust violation by RBS, explaining:

> RBS and RBSSJ [RBS Securities Japan Limited] admit that certain RBS and RBSSJ traders attempted to manipulate and manipulated certain Yen and Swiss Franc LIBOR fixings on certain dates from 2006 through 2010 to benefit their trading positions in derivatives contracts to the detriment of counterparties to those contracts. ***RBS also admitted that certain traders conspired to fix prices*** in connection with Yen LIBOR from 2007 through 2010. To the extent RBS or RBSSJ traders were successful in manipulating Yen and/or Swiss Franc LIBOR, ***other parties to derivatives contracts, mortgages, loans, and/or credit cards that were tied to manipulated LIBOR rates also may have been harmed***.

The DOJ's actions reflect the fact that Defendants' misconduct was the type of which the antitrust laws were designed to prohibit and may have harmed those persons who entered transactions at the fixed price.

217. Thus, The City of Philadelphia paid more, received less, or both on financial instruments tied to Libor than it would have absent a conspiracy among horizontal competitors to fix prices. Due to that conspiracy, The City of Philadelphia also paid much more than it should have when it terminated the swaps. This harm is the result of a naked restraint of trade that lies at the most fundamental concerns of the antitrust laws.

218. Defendants' collusion also restrained competition as to the benchmark in floating-rate financial products. In a free and competitive market, Defendants would have competed vigorously as to the benchmark used to calculate the floating component of price on various financial products to provide the best and most competitive products to their customers.

219. As noted by the court in the Libor MDL, "LIBOR is a proxy for the interbank lending market; indeed, it is precisely because LIBOR was thought to accurately represent prevailing interest rates in that market that it was so widely utilized as a benchmark in financial instruments." *In re LIBOR-Based Fin. Instruments Antitrust Litig.*, No. 11-md-2262, 2013 WL 1285338, at *16 (S.D.N.Y. Mar. 29, 2013). But because of Defendants' collusion, Libor no

longer accurately reflected the competitively-determined outcomes of the interbank lending market during the Relevant Period. Knowing that their collusion meant that Libor no longer served the function it was supposed to serve, Defendants in a competitive market would have competed to use alternative benchmarks that more accurately and reliably reflected actual competitive forces in the market.

220. Defendants, however, did not do this because they wanted to preserve the centrality of Libor rather than some other benchmark precisely because Defendants controlled Libor and could collude to manipulate it for their own ends. According to a press report, in November 2008, in response to complaints about Libor manipulation, the BBA "drew up plans to license Libor to an independent third party that would pay a fee to administer the rate instead of the BBA."[36]

221. This proposal was rejected by Defendants because "when BBA staffers pitched the idea to industry executives, they got the impression that the big banks—which paid most of the BBA's bills through their membership fees—wanted Libor kept in-house so that they could continue to influence it, according to people familiar with the talks."[37] By restraining competition as to the benchmark used to calculate the floating component of price, Defendants were able to maintain the dominance of Libor—a benchmark that they controlled and could collusively manipulate for their own ends, whether to generate profits for their trading books, to bolster their reputations in times of financial stress, or some other end.

222. Competitive market forces should have eliminated the use of Libor financial instruments. But that did not happen. Instead, Libor remained the dominant benchmark for

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[36] David Enrich & Max Colchester, *Before Scandal, Clash over Control of Libor*, Wall St. J., Sept. 12, 2012.

[37] *Id.*

financial instruments sold by Defendants during the Relevant Period, including the interest rate swaps at issue, due to their collusion.

223. Defendants' conduct also restrained competition as to creditworthiness given that Libor submissions reflect perceived creditworthiness. As the DOJ explained, and UBS admitted:

> Because a bank's LIBOR contributions, even if they are not based entirely on actual money market transactions, should correspond to the cost at which the bank perceives that it can borrow funds in the relevant market, a bank's LIBOR contributions may be viewed as an indicator of a bank's creditworthiness. If a bank's LIBOR contributions are relatively high, those submissions could suggest that the bank is paying more than others to borrow funds. Thus, a bank could be perceived to be experiencing financial difficulties because lenders were charging higher rates to that bank.

UBS SOF ¶ 99.

224. Libor reflected the creditworthiness of all large banks by acting as a measure of the stress faced by the financial system as a whole. As the BBA stated: "BBA LIBOR rates are calculated daily from the rates at which banks will agree to lend each other money, so it is accepted as an accurate barometer of how global markets are reacting to prevailing market conditions."[38]

225. In a competitive market, Defendants would compete with their peers, including other panel banks and all market participants, as to their perceived creditworthiness. Greater perceived creditworthiness benefits a bank in many ways, including in the market for Libor-based instruments. Similarly, weak perceived creditworthiness can lead to lower ratings, collateral calls, and other negative actions.

226. Defendants who could truthfully post lower Libor submissions would have had a competitive advantage over Defendants who could not truthfully post lower Libor submissions because of Libor's importance as an indicator of a bank's creditworthiness. In a free and

[38] BBA, *Understanding BBA Libor—a briefing by the British Bankers' Association*, http://www.bbalibor.com/download/1191.

competitive market, then, each Defendant would have competed to appear more creditworthy than other panel banks through the posting of lower truthful Libor submissions, and the stronger banks would not have tolerated artificially low Libor submissions from the weaker banks.

227. During the Relevant Period, however, Defendants restrained competition among the banks for the best market perception of their creditworthiness. Instead of competing with each other to post the lowest but accurate Libor submissions, they conspired to post artificially low Libor submissions as a "pack," which reduced the differences between their relative creditworthiness.

228. The more creditworthy banks did not force the less creditworthy banks to post accurate Libor submissions so that the less creditworthy banks could be revealed as weaker, permitting the stronger banks to take their business. Instead, the stronger banks acceded to the weaker banks' making of falsely low Libor submissions and lowered their own Libor submissions as well. The stronger banks did so because the artificially low Libor enabled them to reap huge trading profits. By lowering their own Libor submissions, the stronger banks reduced the reputational costs caused by other banks suppressing Libor quotes.

229. The restraint of competition as to creditworthiness harmed The City of Philadelphia by enabling the collusive suppression that occurred. Had Defendants competed vigorously over their creditworthiness by striving to make the lowest but accurate Libor submissions relative to the competition, the suppression conspiracy could never have happened in the first place.

230. In addition to being a naked and *per se* unlawful restraint of trade, Defendants' conspiracy was also anticompetitive under the rule of reason.

231. During the Relevant Period, there were markets for the sale of Libor-based instruments, including for the interest rate swaps at issue. Defendants have market power in the market for interest rate swaps. As panel banks for USD Libor, Defendants had the ability to control and exercised control over USD Libor.

232. Defendants' control over Libor meant that they were able to suppress Libor and cause the payments made under the interest rate swaps to be higher than they should have been as a result of Defendants' failure to compete, as well as to cause the other injuries and anticompetitive effects identified above. Defendants' ability to cause supracompetitive payments in the swaps market demonstrates their market power. In addition, Defendants' agreement to exchange confidential, pre-publication Libor quotes also caused supracompetitive payments in the swaps market, and the other injuries and anticompetitive effects identified above.

IV. PLAINTIFF'S CLAIMS ARE TIMELY

A. No Limitations Period Could Begin Until Defendants' Last Bad Act

233. Defendants' misconduct occurred and continued on a daily basis with each false submission to the BBA. Each false submission artificially lowered Libor, reducing the Libor-based payments The City of Philadelphia was entitled to under the swaps. Because Libor remained suppressed when The City of Philadelphia terminated the swaps, it was forced to pay inflated termination fees. The City of Philadelphia would not have been harmed to the extent it was had Defendants' wrongs been only a few isolated acts. Rather, it was the sustained suppression of Libor over a multi-year period that inflicted heavy losses on The City of Philadelphia.

234. The acts of manipulation described herein were not carried out by individuals, but through a conspiracy between and amongst, among others, the panel banks. Such collusion was

necessary because of the way Libor is calculated and has been confirmed by government investigations, as discussed above. Collusion was also necessary in that it kept the panel banks from engaging in a race to the bottom, and instead allowed them to agree upon a level of suppression that would maintain a façade of reliability for Libor as a benchmark. Defendants committed numerous overt acts in furtherance of their conspiracy, including making false submissions to the BBA and actively concealing their misconduct by, among other things, making false or misleading public statements concerning Libor.

235. These facts require the tolling of any otherwise-applicable statute of limitations until, at the very earliest, the occurrence of Defendants' last bad act.

B. <u>Inquiry Notice, Equitable Tolling, and Fraudulent Concealment</u>

236. In reality, the statutes of limitations applicable to The City of Philadelphia's claims did not begin to run until much later. This is because during the Relevant Period, Defendants effectively, affirmatively, and fraudulently concealed their wrongful acts from The City of Philadelphia and the public. The City of Philadelphia did not know, nor could it reasonably have known, facts indicating that Defendants were engaging in intentional misconduct that caused Libor to be artificially depressed until, at the earliest and likely much later, March 15, 2011, when UBS disclosed that it was being investigated by the U.S. government with regard to Libor manipulation in coordination with other banks, or June 2012, when the settlements with Barclays were made public.

1. Defendants' wrongful conduct was self-concealing

237. Defendants' conspiracy to share information about, and to coordinate, their individual Libor submissions and to misrepresent their borrowing costs to the BBA was, by its very nature, self-concealing, and Defendants made every effort to ensure it remained concealed.

Defendants' efforts to suppress Libor only worked as long as they did because they were and remained hidden.

238. Regulators have emphasized the secretive nature of Defendants' conspiracy. In its findings against UBS, for example, the FSA stated that: "[t]he misconduct was extensive and widespread" and included "an unquantifiable number of oral requests, which by their nature would not be documented."[39]

239. In addition, Defendants' Libor submissions were not made based on objective metrics observable to market participants. This fact, combined with the general opacity of the interbank loan market *and* with the highly confusing and unreliable condition of the market during the height of the financial crisis during 2008, made the self-concealing nature of Defendants' scheme all the more pronounced. As a result of these factors, no reasonable investor would have had any reason to conclude that any discrepancies between Libor and other measures of Defendants' borrowing costs were due to Defendants' intentional efforts, rather than market disruption or other factors.

2. Defendants actively concealed their conduct and deflected any and all concerns that were sporadically raised

240. Defendants also engaged in affirmative acts to conceal their misconduct. As a result, even extremely sophisticated market participants were unaware that this misconduct was occurring. As noted at the outset of this Complaint, the former Chairman of the United States Federal Reserve, Alan Greenspan, has commented: "Through all of my experience, what I never contemplated was that there were bankers who would purposely misrepresent facts to banking

[39] Financial Services Authority, FSA/PN/116/2012, *UBS fined £160 million for significant failings in relation to LIBOR and EURIBOR* (Dec. 19, 2012), http://www.fsa.gov.uk/library/communication/pr/2012/116.shtml.

authorities. You were honor-bound to report accurately, and it never entered my mind that, aside from a fringe element, it would be otherwise."

241. Defendants, in conjunction with the BBA, actively denied the existence of a conspiracy and engaged in a campaign of misinformation to mask the widespread, systematic suppression that was occurring. For example, on November 29, 2007, a Barclays manager contacted a representative of the BBA to advise that USD "LIBORs are being set lower than where they ought to be" and informed the BBA that this issue applied to all of Defendants. The Barclays manager stated that Defendants were submitting rates that were too low because "banks are afraid to stick their heads above the parapet and post higher numbers because of what happened to [Barclays] when [Barclays] did. You get shot at." The Barclays manager identified certain other Defendants that were submitting Libor rates lower than where those banks could actually borrow funds. In order to protect its members, however, the BBA kept this information from the public. It was only released much later, in connection with Barclays' settlement agreements.

242. The BBA's Foreign Exchange and Money Markets Committee—which was responsible for the functioning and development of Libor and counted certain of Defendants among its members—likewise covered up Defendants' fraudulent and collusive scheme. UBS's representative on the Foreign Exchange and Money Markets Committee in 2009, for instance, knew that Libor was being rigged but directed employees to "be careful" not to expose Defendants' wrongdoing.

243. Because UBS and other Defendants made a concerted effort to hide their misconduct from regulators and the public, the FSA concluded that the "routine and widespread

manipulation of the submissions was not detected by Compliance or by Group Internal Audit," despite five audits of the relevant business area during the Relevant Period.

244. Defendants also concealed their misconduct from regulators through outright falsehoods. For example, on March 5, 2008, the FSA asked Barclays what it was paying for funding in certain tenors and currencies. A Barclays manager stated internally that he did not want to disclose that Barclays was borrowing USD "way over LIBOR" and would rather indicate that it was paying a rate equal to Libor. A Barclays submitter agreed that if he responded with "the honest truth" it might open a "can of worms." Barclays responded to the FSA that it was paying for twelve-month USD at Libor "flat," which was false.

245. Even when regulators began to uncover evidence that Defendants were falsifying their Libor submissions, they did not immediately reveal that information to the public. On April 11, 2008, for instance, a Barclays employee told an employee of the New York Federal Reserve that he was aware Defendants were making Libor submissions lower than what they were actually paying and that "the ones that need the cash most put in the lowest, lowest rates."[40] The Barclays employee said that Barclays could not borrow money at the rates submitted by other Defendants and that "if we can't borrow money at that rate . . . [t]hen no one else could really . . . . I mean we, you-you know we speak to everyone that everyone else does so . . . [u]m, yeah it's, it's quite, quite an uncomfortable feeling, and . . . I don't know if at some stage LIBORs will correct themselves." This information was not publicly disclosed until July 2012.

[40] New York Federal Reserve Bank, Unofficial Transcript, ID09274211, at 7 (Apr. 11, 2008), *available at* http://www.newyorkfed.org/newsevents/news/markets/2012/libor/April_11_2008_transcript.pdf.

246. Similarly, on October 10, 2008, a Barclays employee privately reported to the New York Federal Reserve that its USD Libor submissions were "unrealistic."[41] And on October 24, 2008, another Barclays employee privately reported to the New York Federal Reserve that USD Libor rates were "absolute rubbish," citing submissions by WestLB and Deutsche Bank as being artificially low.[42] The employee stated he was aware of banks that were making Libor submissions that were below what they actually paid to borrow funds. Again, none of this was revealed to the public until recently.

247. Not only did Defendants and the BBA hide the fact that Libor was being artificially manipulated, but they also actively misled investors and the public by making false representations about the integrity of the Libor fixing process. In 2008, the BBA's "LIBOR Governance and Scrutiny" report stated that "[t]he BBA employs a full time manager to supervise on a day-to-day basis all aspects of LIBOR calculation and dissemination to the marketplace. The LIBOR manager works with a team of professionals both in-house and externally to ensure all processes operate to the highest standards."[43] The report further explained that "Thomson Reuters . . . act[s] as the 'designated distributor' of BBA LIBOR rates. All contributions to the LIBOR rate-setting process are collected by Thomson Reuters, who currently perform[s] checking procedures, supervised by the LIBOR manager, on all the

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[41] New York Federal Reserve Bank, Unofficial Transcript of Telephone Call, BARC-MAY6-000091-97, at 95 (Oct. 10, 2008), *available at* http://www.newyorkfed.org/newsevents/news/markets/2012/libor/October_10_2008_transcript. pdf.

[42] New York Federal Reserve Bank, Unofficial Transcript of Telephone Call, BARC-MAY6-00098-100, at 000098, 000100 (Oct. 24, 2008), *available at* http://www.newyorkfed.org/newsevents/news/markets/2012/libor/October_24_2008_transcript.pdf.

[43] BBA, *LIBOR Governance and Scrutiny* (Dec. 18, 2008), http://www.bbalibor.com/download/4025.

submissions before running the calculation and distributing the fixes." Investors like Plaintiff had no reason to disbelieve assurances by the BBA that Libor was not being manipulated.

248. Defendants also engaged in a media campaign, characterized by the BBA as an "offensive," that was designed to avoid public scrutiny of their Libor submissions, particularly after a report was published in the *Wall Street Journal* in April 2008 questioning the accuracy of Libor at that time.

249. On April 21, 2008, for instance, Dominic Konstam of Credit Suisse affirmatively stated that low Libor rates were attributable to the fact that U.S. banks, such as Citi and JPMorgan, had access to large customer deposits and borrowing from the Federal Reserve and did not need more expensive loans from other banks: "Banks are hoarding cash because funding from the asset-backed commercial paper market has fallen sharply while money market funds are lending on a short term basis and are restricting their supply." Through statements such as this, Defendants provided credible alternative explanations for low Libor rates (such as cash hoarding) that were plausible to investors.

250. In an April 28, 2008 interview with the *Financial Times*, Konstam continued to defend Libor's reliability: "Libor has been a barometer of the need for banks to raise capital. The main problem with Libor is the capital strains facing banks. . . . Initially there was some confusion that Libor itself was the problem, with talk of the rate being manipulated and not representative of the true cost of borrowing." As a result of these statements, Credit Suisse misled investors to believe that low Libor rates were a function of readily available alternative sources of cash, which lessened the need for interbank borrowing, rather than any collusive effort to suppress Libor.

251. In a May 16, 2008, Reuters report, JPMorgan made the assertion—which was highly plausible at the time—that the volatility in Libor rates was a reflection of the unfolding financial crisis:

> The Libor interbank rate-setting process is not broken, and recent rate volatility can be blamed largely on reluctance among banks to lend to each other amid the current credit crunch.
>
> * * *
>
> Everyone is funding at a similar level, but when credit conditions worsen and we have periods like this of unprecedented turmoil, the reality is there is not a single borrowing rate.

252. JPMorgan further asserted that differences between Libor and other indices at that time could "largely be explained" by limitations that had existed since the inception of the Libor in 1984, and stated that the "main limitations of Libor are due more to lack of liquidity in the market rather than any bias in the fixing process." JPMorgan further reported that the composition and "constituents" of the BBA Libor Panel consisted of "some of the best known and best capitalized banks in the world." And therefore, "[i]n a market where significant credit tiering is evident, it seems plausible the BBA panel banks could enjoy an advantage in credit costs." The research report further explained the reasons that the "Fed data" differed from Libor was owing to the fact that the BBA trims the highest and lowest quartile and averages the remaining rates, whereas the "Fed data is untrimmed and is likely to contain more outlying observations," thus tending to "pull" the Federal Reserve's daily published rate "above the BBA Libor level."

253. In that same report, Colin Withers of Citi claimed Libor was reliable because its methods were time-tested: "the measures we are using are historic—up to 30 to 40 years old."

254. On May 29, 2008, the *Wall Street Journal* published another article raising questions about accuracy of Libor based on data over a short period in early 2008. That article

suggested that one "possibility" might be that some banks had understated their borrowing costs but stopped far short of demonstrating that this was a probability. Rather, as the article acknowledges, "[t]he Journal's analysis doesn't prove that banks are lying or manipulating Libor," and even if the Libor data that the banks were submitting in the Libor process were in "doubt" or "flawed," various other explanations for the observed data, which did not involve wrongdoing, were accepted at the time to be *at least* just as plausible.

255. One explanation that the *Journal* article itself offered for the observed data, which did not involve wrongdoing and which is consistent with explanations expressed by both the U.K.'s FSA and the BBA, is that "since the financial crisis began, banks have all but stopped lending to each other for periods of three months or more, so their estimates of how much it would cost to borrow involve a lot of guesswork."

256. This explanation, considered plausible at the time, considered the "gap" observed in the *Wall Street Journal* article to be a byproduct of "structural issues in the Libor fixing process interacting with the deteriorating market conditions," rather than being the result of any wrongdoing.[44] At the time, even the U.K.'s financial regulator held the view (even after the May 29, 2008 publication and consideration of the *Wall Street Journal's* analysis and other analyses during the April and May 2008 time period), that "[t]he combination of deteriorating market conditions and structural issues in the LIBOR fixing process . . . caused dislocation completely independent of any [wrongdoing]."[45]

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[44] *See, e.g.*, FSA, "Internal Audit Report: A Review of the Extent of Awareness within the FSA of Inappropriate LIBOR Submissions" ¶ 28 (2013), *available at* http://www.fca.org.uk/static/pubs/other/ia-libor.pdf ("FSA Audit Report").

[45] *Id.* ¶ 26.

257. As an additional explanation as to why this analysis did not lead one to conclude that "banks [were] lying or manipulating Libor," the *Wall Street Journal* explained that certain banks "have ample deposits and access to loans from the Federal Reserve, meaning they might not need to borrow at higher rates from other banks."[46]

258. Defendants and the BBA continued their offensive to mislead investors after May 29, 2008. That same day, Citi falsely stated it continued to "submit [its] Libor rates at levels that accurately reflect [its] perception of the market." HBOS, another panel bank, likewise asserted its Libor quotes constituted a "genuine and realistic" indication of the bank's borrowing costs. All of these representations were false, and were designed to prevent investors like The City of Philadelphia from discovering that Libor was being rigged.

259. Rather, in providing the results of its investigation, in August 2008, the BBA declared that Libor had not been manipulated. On August 5, 2008, the BBA published a "Feedback Statement" on Libor which concluded that "contributing banks . . . were confident that their submitted rates were 'truly reflective of their perceived borrowing costs,'" Barclays DOJ SOF ¶ 44, and further that "*all contributing banks are confident that their submissions reflect their perception of their true costs of borrowing, at the time at which they submitted their rates*." Barclays FSA Final Notice ¶ 138 (emphasis added).

260. The BBA also publicly announced it would expel any panel bank that deliberately submitted inaccurate Libor quotes. But it never did so, leading the ordinary person to understand that, during the BBA's review, no bank was found to have been reporting inaccurate Libor rates. Thereafter, in nearly every article during 2008 in which the integrity of Libor was questioned, a BBA spokesperson was quoted stating the benchmark was valid and reliable.

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[46] Carrick Mollenkamp & Mark Whitehouse, *Study Casts Doubt on Key Rate*, Wall St. J., May 29, 2008.

3. As a result of Defendants' conduct, no reasonable investor would have known of the probability that it had been injured by Defendants' joint suppression of Libor until March 2011 or June 2012

261. Libor's brief rise in September 2008 and the subsequent creation and expansion of liquidity and bailout facilities in the United States and globally made it difficult or impossible to discern signs of manipulation contemporaneously. Consequently, Libor's movements from September 2008 to at least December 2009 were widely accepted as valid and incorporated into government, investor, and academic analyses in reliance on their integrity. For example, through at least December 2009 it was widely accepted that the spread between Libor and the OIS during the Relevant Period was an appropriate index of interbank liquidity risk.

262. A search of the academic literature on Libor after September 2008 overwhelmingly returns analyses accepting the integrity of Libor during this period. Almost no one suspected that Libor had been suppressed after September 2008, let alone by the magnitude now apparent, and certainly not that it was attributable to the type of collusion that has since come to light.

263. Similarly, beginning in October 2008, financial reporting focused extensively on the fact that Libor was at historic highs. In light of the fact that Libor was at or near record highs, a reasonable investor would not have suspected that banks were actively suppressing Libor.

264. Even before that period, an academic study in the respected *BIS Quarterly Review* and published in March 2008 found no evidence of collusion or even manipulation in setting Libor using data up to January 2008. A study by Gyntelberg and Wooldridge states:

> If a majority of banks engaged in strategic behaviour, then trimming alone would not have mitigated the impact on the fixing. That said, there is little evidence that this was the case. In the US dollar market, the widening of Sibor and H.15 spreads over Libor is consistent with signalling [sic] by Libor contributor banks. However, many of the banks on the US dollar Libor panel are also on the euro Libor panel, and there

> are no signs that signalling [sic] distorted the latter fixing. Likewise, ***available data do not support the hypothesis that contributor banks manipulated their quotes to profit from positions based on fixings***.

265. Instead the academics conclude: "A deterioration in market liquidity, an increase in interest rate volatility and differences in the composition of the contributor panels were the main causes of the divergence." These academics thus attributed the dislocation in Libor to market factors peculiar to the financial crisis and idiosyncratic to the particular reporting banks.

266. In 2009, another academic study published in the *BIS Quarterly Review* also found no evidence of manipulation as late as May 2008. Notably, this study attempted to "extend" the *Wall Street Journal* study to ascertain whether Libor manipulation was occurring. Abrantes-Metz *et al.* state:

> On May 29, 2008, the Wall Street Journal (the Journal) printed an article that alleged that several global banks were reporting unjustifiably low borrowing costs for the calculation of the daily Libor benchmark. Specifically, the writers alleged that the banks were reporting costs that were significantly lower than the rates that were justified by bank-specific cost trend movements in the default insurance market. . . .
>
> In this paper, we extend the Journal's study and perform the following analyses: (a) a comparison of Libor with other rates of short-term borrowing costs, (b) an evaluation of the individual bank quotes that were submitted to the British Banker's Association (BBA), and (c) a comparison of these individual quotes to individual CDS spreads and market cap data. We do so during the following three periods: 1/1/07 through 8/8/07 (Period 1), 8/9/07 through 4/16/08 (Period 2), and 4/17/08 through 5/30/08 (Period 3). Furthermore, on April 17, 2008, the Wall Street Journal first published the news that the BBA intended to investigate the composition of these rates.
>
> Individual Libor quotes are analyzed from January 2007 through May 2008, while the level of the Libor itself is studied from 1990 using Bloomberg data sources. After verifying that the patterns are essentially the same for the one month and three month Libor rates, we generally restrict our attention to the one month Libor. We also study data on other market indicators, both at aggregate levels and for the individual Libor banks. A few missing days are filled by linear interpolation. Our primary findings are that, while there are some apparent anomalies within the individual quotes, ***the evidence found is inconsistent with an effective manipulation of the level of the Libor*** [emphasis added].

267. The upheaval in the markets, the lack of available data on interbank lending, and in particular the bailout facilities made available to the panel banks were widely understood to be the factors causing interest rates to behave anomalously during the Relevant Period, as almost every other economic indicator—from the price of crude oil, to the rate of inflation, to the interest rates on short-term deposits—did during the Relevant Period. Thus, Libor was understood to be sending meaningful economic signals about the crisis rather than exhibiting signs of tampering.

268. Because Defendants took affirmative steps to conceal their misconduct, no reasonable investor could have discovered facts indicating that Defendants were unlawfully manipulating Libor until, at the earliest, March 15, 2011—the date that UBS first announced that it was being investigated for Libor manipulation.

269. Even then, however, The City of Philadelphia did not realize the true nature and extent of Defendants' conspiracy. It was not until the recent revelations from the Barclays, UBS, and RBS settlements, as well as the news of arrests and indictments, that Defendants' misconduct began to come to light. These revelations surfaced after a year-and-a-half intensive global probe that involved investigators and regulatory authorities from around the world, something that investors like The City of Philadelphia could not have done on their own. Even today, the full scope of the conspiracy continues to evolve as investigations uncover additional evidence.

270. For years after Defendants' and the BBA's denials were issued, there were virtually no indications that Libor manipulation had persisted beyond May 2008. For example,

even in March 2011, when government investigations into rate-setting misconduct first came to light, it was universally reported that the inquiry was focused on this early period.[47]

271. Yet between December 2009 and March 2011 no news reports indicated even a suspicion that Libor had experienced continued manipulation. If investors should have recognized signs that Libor was manipulated in late 2008 and 2009, one would expect there to be at least some discussion in the public record. Instead, virtually no suspicions were aired.

272. Investors could not have detected Defendants' Libor manipulation because the integrity of Defendants' submissions were within their exclusive knowledge: only Defendants could know whether they were accurately reporting the rates at which they could borrow.

273. The proof of Defendants' successful concealment of their misconduct is that even though, as discussed above, hundreds if not thousands of state and local governmental entities suffered losses due to the swaps that Wall Street banks pushed on them, none of these entities were aware that Defendants had rigged the key pricing term of these swaps—the Libor term—until recently. Once these swaps began to go bad, many governmental entities tried to explore their legal options. But, except in cases like Jefferson County, where there was evidence of overt bribery, those legal options were thought to be very limited. It is only now that disclosures resulting from governmental investigations have established that Defendants were actively engaged in collusive price fixing, and in breaching the terms of their swap contracts by fraudulently manipulating the floating rate, have viable legal theories emerged for pursuing long-overdue redress for the harm suffered by governmental entities and, ultimately, their citizens.

[47] Brooke Masters, *et al.*, *Big banks investigated over Libor*, Fin. Times, March 15, 2011, *available at* http://www.ft.com/intl/cms/s/0/ab563882-4f08-11e0-9c25-00144feab49a.html.

274. As further proof of the fact that no reasonable investor had reason to be on notice that Defendants were actively suppressing Libor in 2008 or 2009, a study has been conducted to determine whether Libor panel bank members suffered any significant stock losses in response to articles raising questions about Libor's accuracy in April or May 2008. That study demonstrates that the articles did not affect stock prices, confirming that these articles were not in any way sufficient to convey to investors that there was any basis upon which to conclude that panel banks were intentionally suppressing Libor, much less in a collusive manner.

275. More specifically, the analysis tested the hypothesis that these articles implied to a person of ordinary intelligence, with at least 50% probability, that Libor was being manipulated. The results of the analysis, as described more fully below are that despite the possible negative financial consequences to the health of the banks, the markets did not react to the 2008 articles and only reacted slightly at most to the March 15, 2011 disclosure by UBS that it had received subpoena in connection with a Libor manipulation by punishing Defendants' stock prices. To the contrary, the only time that the stock prices of the Defendants decreased in a statistically significant way against a baseline index was in June 2012, when Barclays announced its settlement with governmental authorities. The conclusion to draw from this is that the market, composed of highly sophisticated investors, did not seriously contemplate that the Defendants would have any exposure for Libor manipulation until June 2012 and consequently were not on inquiry notice of such a probability until that time.

276. The analysis also inquired as to the kind of price reactions that would have occurred if typical market participants thought that Libor was manipulated with 50% or higher likelihood. In other words, if the average investor were to expect that a bank had committed a fraud with a 50% or higher likelihood, the average investor would also expect this to impose

significant costs on the offending banks such that the stock price of those banks would decline substantially to reflect the 50% or higher likelihood of paying significant damages. Here, the recent settlements of Barclays, UBS, and RBS with regulatory authorities resulted in these defendants collectively paying almost $3 billion for Libor manipulation to government regulators alone. The *Financial Times* recently estimated that the currently-held Libor linked financial products have about $350 trillion in notational value in 2013. Given these enormous dollar volumes of Libor-linked financial products, potential exposure to private claimholders could be many multiples greater than the government settlements. Consequently, if the 2008 articles created an expectation, with at least a 50% likelihood, that banks had engaged in an illegal manipulation scheme with a possible cost of tens of billions of dollars each, the expectation is that each of the banks would suffer substantial stock losses when those articles were published.

277. The analysis conducted a regression of the stock returns for each of the panel banks on the value-weighted stock market index and indicator variables on the dates of each of the 2008 articles as well as on the announcement of the UBS subpoenas in March 2011 and the Barclays settlement in June 2012.

278. If the 2008 articles created an expectation of possible manipulation by Defendants for the average investor, the analysis is expected to show substantial stock price declines for each bank on at least some of the dates after controlling for the overall stock market index. These stock price declines should result in statistically significant negative parameter coefficients for the indicator variables.

279. The results, which have been publicly reported in detail, demonstrate that none of the 2008 articles are associated with any statistically significant negative stock price reactions for any of the defendant banks for which stock prices are available. The only exception to this

finding is HSBC and Bank of Tokyo on March 16, 2011, when their stock prices declined abnormally at 3% and 4.5% respectively. However, these are the only banks that declined statistically significantly on this date, which is approximately when UBS announced that it was being investigated for Libor irregularities.

280. Further, the largest stock price reaction for the panel banks occurred on June 28, 2012. During June 27-28, 2012, the $453 million Barclays settlement was publicly announced. In reaction to this announcement, Barclays' stock price suffered a decline of almost 12%, resulting in a market cap decline of about $4.5 billion in a single day. This stock price drop exceeded the settlement fine by about ten-fold indicating likely additional future costs for Barclays such as settlements with private claimholders. RBS also declined by a statistically significant 9.4% on June 28, 2012. The other panel banks collectively suffered a statistically significant 2.97% abnormal stock price decline on this day, thus recognizing some of the implications of the Barclays settlement for the other panel members at this time.

281. Overall, the evidence that has been objectively reported supports The City of Philadelphia's assertion that it was not on inquiry notice of its injuries until, at the very earliest, after March 15, 2011 (when UBS announced that it had been subpoenaed in connection with the U.S. government's investigation of possible Libor manipulation), and, in fact, June 2012, because none of the 2008 articles changed the expectations of the ordinary investor. Based on this objective statistical evidence, the 2008 articles do not serve as inquiry notice

282. To further confirm this point, both the United States and the United Kingdom continued to rely on Libor in 2008 and throughout the Relevant Period. This also shows that a reasonable investor was not on inquiry notice during this period.

283. As an example, in July 2008, the U.K. Treasury utilized Libor in connection with its Special Liquidity Program despite evidence that three-month Libor was declining. That it continued to do so after articles suggesting suppression indicates that the Treasury had faith in Libor despite sporadic speculation concerning its accuracy.

284. In late 2008, the U.S. Treasury caused the terms of Treasury-supported Small Business Administration loans to change from "Prime, a domestic interest rate, to LIBOR." The U.S. Treasury also extended billions of dollars of loans on which it received Libor-based interest payments:

- On December 31, 2008, the U.S. Treasury agreed to lend General Motors Corporation $13.4 billion based on "LIBOR +3%."

- On January 2, 2009, the U.S. Treasury agreed to lend Chrysler Holding LLC $4 billion based on "3% or 8% (if the company is in default of its terms under the agreement) plus the greater of a) three-month LIBOR or b) LIBOR floor (2.00%)."

- On January 16, 2009, the U.S. Treasury agreed to lend General Motors $884 million based on "LIBOR +3%."

- On January 16, 2009, the U.S. Treasury agreed to lend Chrysler Financial $1.5 billion based on "LIBOR + 1% for first year[,] LIBOR + 1.5% for remaining" term.

285. Beginning in the Second Quarter of 2009, the FDIC, Federal Reserve and Treasury agreed to extend LIBOR-based loans to financial institutions through TARP's Public-Private Investment Program for Legacy Assets ("PPIP").

286. During the period 2009-10, the U.K. Treasury issued Libor-based loans to the Financial Services Compensation Scheme, which was established to repay the depositors of failed banks.

287. In her July 2010 Quarterly Report to Congress, the TARP Inspector General explained that most TALF loans were tied to Libor, "a generally accepted short-term interest rate standard."

288. On October 12, 2012, Senators Charles E. Grassley and Mark Kirk criticized Timothy Geithner, who during the financial crisis was in charge of the New York Federal Reserve and was privy to exclusive non-public information obtained from the panel banks, for not "[taking] action to end the dominance of LIBOR, or at least inform the American public" about the "flawed index."

289. The above examples demonstrate that, given the continuing reliance on Libor by the U.S. and U.K. governments, a reasonable investor would not have concluded that Libor was being actively suppressed.

290. Throughout the Relevant Period, The City of Philadelphia diligently sought to protect its investment interests, including by analyzing the swaps in question and their performance. Despite the exercise of active and reasonable diligence, however, The City of Philadelphia could not and did not uncover Defendants' misconduct due to the self-concealing nature of their scheme and their active efforts to hide it from the public. For these reasons, any statute of limitations affecting or limiting the rights of action by Plaintiff was equitably tolled.

C. The *American Pipe* Doctrine Applies to Plaintiff's Claims.

291. On April 15, 2011, a class action was filed against certain panel banks on behalf of those who transacted Libor-based contracts in the over-the-counter market between 2006 and June 2009. *See FTC Capital Gmbh v. Credit Suisse Grp., et al.*, Case No. 11-cv-2613 (S.D.N.Y. Apr. 15, 2011). On August 12, 2011, this action was consolidated as Case No. 11-md-02262. The *FTC Capital* complaint alleged claims for (a) manipulation in violation of the Commodity Exchange Act, 7 U.S.C. § 1, *et seq.*, (b) vicarious liability for manipulation under the

Commodity Exchange Act, (c) violation of Section 1 of the Sherman Act, 15 U.S.C. § 1, and (d) unjust enrichment and restitution. Plaintiff here brings claims for antitrust violations and for unjust enrichment and restitution. In addition, proof of The City of Philadelphia's other claims will require evidence of the same or similar wrongful acts as would proof of the claims asserted in *FTC Capital* and other class actions in the Libor MDL proceeding.

292. The City of Philadelphia was originally included in the defined class in *FTC Capital* in addition to other class actions.

293. Defendants BAC, Barclays, Citibank, Credit Suisse, Deutsche Bank, JPMorgan Chase & Co, and UBS are defendants in *FTC Capital* as is The Royal Bank of Scotland Group plc, the parent company of Defendant RBS.[48]

294. The City of Philadelphia reasonably and justifiably relied on the named plaintiffs in *FTC Capital* and other class actions in the Libor MDL proceeding to protect its rights, and it reasonably and justifiably relied on the class-action doctrines articulated in *American Pipe & Construction Co. v. Utah*, 414 U.S. 538 (1974), and *In re WorldCom Securities Litigation*, 496 F.3d 245, 256 (2d Cir. 2007), and other similarly applicable doctrines, to satisfy the statutes of limitations and repose on its claims.

295. Under *American Pipe*, all putative class members are treated as if they filed their own individual actions, until they either opt out or a certification decision excludes them. *American Pipe*, 414 U.S. at 255.

296. Accordingly, the claims here are deemed to have been brought as of the date they or similar claims were brought in the related class actions.

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[48] Other Defendants in this Complaint have since been named defendants in other class actions in the Libor MDL proceeding. For example, Defendants BANA, Citigroup, JPMC Bank, and RBC were named defendants in the Consolidated Amended Complaint filed by the City of Baltimore on April 30, 2012.

FIRST CAUSE OF ACTION
(BREACH OF CONTRACT AGAINST DEFENDANT CITI)

297. Plaintiff realleges each allegation above as if fully set forth herein.

298. This count is against Defendant Citi.

299. Plaintiff entered into an ISDA Master Agreement with Defendant Citi dated December 5, 2002, which is accompanied by a Schedule, a Credit Support Annex, and Swap Confirmations as detailed in the Exhibits.

300. As detailed in Exhibit A, these agreements (the "Citi Agreements") collectively required Citi to calculate and pay Plaintiff a Floating Amount determined in good faith and in a commercially reasonable manner and based on a Libor untainted by manipulation.

301. Citi knowingly breached and defaulted on the Citi Agreements through its fraudulent conduct, its failure to disclose its fraudulent conduct and improper collusion with other Defendants, its intentional misrepresentation and manipulation of Libor, and its making of underpayments to Plaintiff based on the artificially suppressed Libor.

302. As a direct and proximate result of Citi's breaches of the Citi Agreements, Plaintiff has suffered an economic loss and damages in an amount to be determined at trial, and is entitled to be placed in the same situation as if the Citi Agreements had been fully performed. Plaintiff seeks all losses caused by Libor suppression, including loss of interest, lost profits, and all losses on the swaps, including when it was forced to unwind. Plaintiff has also incurred reasonable out-of-pocket expenses, including legal fees, to enforce and protect its rights under the Citi Agreements.

SECOND CAUSE OF ACTION
(BREACH OF IMPLIED COVENANT OF GOOD FAITH AND FAIR DEALING AGAINST DEFENDANT CITI)

303. Plaintiff realleges each allegation above as if fully set forth herein.

304. This count is against Defendant Citi.

305. The Citi Agreements contained the provisions described above. Implied in these agreements was a covenant that the parties would deal with each other in good faith and would not engage in any conduct to deprive the other of the benefits of the agreements.

306. Citi failed to perform its obligations in good faith under these agreements by knowingly, intentionally, and secretly suppressing Libor to reduce its payments under the swaps to its advantage at the expense of Plaintiff, and by negotiating settlement amounts to terminate one swap based on artificially suppressed Libor. Citi knew that Plaintiff had entered into the swaps, and was willing to pay a termination fee for the swap in question, only in reliance on the integrity of Libor.

307. As Citi knew, however, its manipulation of Libor deprived Plaintiff of the benefit of the bargain by causing payments to Plaintiff under the swaps to be much lower than they should have been and causing Plaintiff to make an inflated termination payment. As a direct and proximate result of Citi's knowing, intentional, and bad faith violation of the Citi Agreements' implied covenant of good faith and fair dealing, Plaintiff has suffered damages in an amount to be determined at trial. Plaintiff seeks all losses caused by Libor suppression, including loss of interest, lost profits, and all losses on the swaps, including when Plaintiff unwound one of the swaps and made an inflated termination payment.

THIRD CAUSE OF ACTION (BREACH OF IMPLIED COVENANT OF GOOD FAITH AND FAIR DEALING AGAINST DEFENDANT JPMORGAN)

308. Plaintiff realleges each allegation above as if fully set forth herein.

309. This count is against Defendant JPMorgan.

310. Plaintiff entered into an ISDA Master Agreement with Defendant JPMorgan dated January 20, 2006, which is accompanied by a Schedule, a Credit Support Annex (as incorporated

by Part 3(6) of the Schedule), and Swap Confirmations as detailed in the Exhibits. These agreements are collectively referred to as the "JPMorgan Agreements."

311. Implied in the JPMorgan Agreements was a covenant that the parties would deal with each other in good faith and would not engage in any conduct to deprive the other of the benefits of the agreements.

312. JPMorgan failed to perform its obligations in good faith under these agreements by knowingly, intentionally, and secretly suppressing Libor and by negotiating settlement amounts to terminate swaps with Plaintiff based on artificially suppressed Libor. JPMorgan knew that Plaintiff was willing to pay a termination fee for the swap in question only in reliance on the integrity of Libor.

313. As JPMorgan knew, however, its manipulation of Libor deprived Plaintiff of the benefit of the bargain by forcing Plaintiff to make inflated termination payments. As a direct and proximate result of JPMorgan's knowing, intentional and bad faith violation of the JPMorgan Agreements' implied covenants of good faith and fair dealing, Plaintiff has suffered damages in an amount to be determined at trial. Plaintiff seeks all losses caused by Libor suppression, including loss of interest, lost profits, and all losses on the bonds, including when Plaintiff was forced to unwind.

FOURTH CAUSE OF ACTION
(BREACH OF IMPLIED COVENANT OF GOOD FAITH AND FAIR DEALING AGAINST DEFENDANT ROYAL BANK OF CANADA)

314. Plaintiff realleges each allegation above as if fully set forth herein.

315. This count is against Defendant RBC.

316. Plaintiff entered into an ISDA Master Agreement with Defendant RBC dated December 6, 2007, which is accompanied by a Schedule, a Credit Support Annex, and a Swap

Confirmation as detailed in the Exhibits. These agreements are collectively referred to as the "RBC Agreements."

317. Implied in the RBC Agreements was a covenant that the parties would deal with each other in good faith and would not engage in any conduct to deprive the other of the benefits of the agreements.

318. RBC failed to perform its obligations in good faith under these agreements by knowingly, intentionally, and secretly suppressing Libor and by negotiating settlement amounts to (partially) terminate one swap based on artificially suppressed Libor. RBC knew that Plaintiff was willing to pay a termination fee for the swap in question only in reliance on the integrity of Libor.

319. As RBC knew, however, its manipulation of Libor deprived Plaintiff of the benefit of the bargain by forcing Plaintiff to make inflated termination payments. As a direct and proximate result of RBC's knowing, intentional and bad faith violation of the RBC Agreements' implied covenants of good faith and fair dealing, Plaintiff has suffered damages in an amount to be determined at trial. Plaintiff seeks all losses caused by Libor suppression, including loss of interest, lost profits, and all losses on the swaps, including when Plaintiff was forced to (partially) unwind one of the swaps.

FIFTH CAUSE OF ACTION
(COMMON-LAW FRAUD AGAINST ALL DEFENDANTS)

320. Plaintiff realleges each allegation above as if fully set forth herein.

321. This count is against all Defendants, for joint and several liability for all losses associated with all of the transactions identified in Exhibit A.

322. Defendants were USD Libor panel banks throughout the Relevant Period and submitted false Libor submissions to the BBA on a daily basis. The panel banks participated in the fraudulent conduct alleged herein both directly and through their subsidiaries and affiliates.

323. Defendants made, authorized, or caused the following material misrepresentations and omissions:

a. Counterparty Defendants made, authorized, and caused false statements or omissions to be made to Plaintiff to induce Plaintiff to enter into the swaps.

b. Each Defendant also made, authorized, or caused false submissions to be made to the BBA for the purposes of determining Libor.

c. By their false submissions, each Defendant caused Libor to misrepresent actual panel bank borrowing rates.

d. Each Defendant had a duty to disclose the manipulation of Libor to its counterparties and the public, including Plaintiff, but omitted to do so.

e. By their omissions and affirmative denials, each Defendant participated in concealing the falsity of its submissions and the manipulation of Libor from Plaintiff and the public.

f. Counterparty Defendants misrepresented the basis of payments Plaintiff would receive under the swaps, and omitted to disclose that the Floating Amounts would be calculated by reference to manipulated Libor.

g. Counterparty Defendants misrepresented the amount of the payments owed by Plaintiff on early termination of the swaps, and omitted to

disclose that the inflated amounts were calculated by reference to manipulated Libor.

324. Defendants made these misrepresentations and omissions knowing that they were false or misleading, or with reckless disregard for their truth, in part to avoid detection and to perpetuate the fraudulent and collusive conduct described in this Complaint.

325. Defendants had reason to expect that Plaintiff was among the class of persons who would receive and rely on their misrepresentations, including the statements and omissions passed through the BBA to the investing public.

326. Defendants had an obligation and a duty to disclose that they were artificially manipulating Libor, which directly and negatively impacted Libor-linked transactions between the Plaintiff on the one hand, and Defendants on the other. Such duties were triggered not only by the contractual relationship between the parties, but also by their exclusive knowledge over the true (manipulated) nature of Libor, among other things, submitting Libor bids to the BBA without disclosing they were suppressed and falsely denying any manipulation had taken place.

327. Defendants knew or recklessly disregarded material facts demonstrating that their misrepresentations and omissions were false and/or misleading at the time they were made. Defendants further knew that they were failing to disclose material facts that they had a duty to disclose. Defendants made the false and misleading statements with intent to induce the reliance of Plaintiff and to defraud Plaintiff.

328. At the time these misrepresentations were made and the material facts not disclosed, Plaintiff was ignorant of the true facts. If Plaintiff had known the truth, Plaintiff would not have entered into the swaps, accepted or made payments calculated based on

artificially low Libor, agreed to artificially inflated termination payments, or engaged in any other of the transactions triggered by such calculations.

329. Plaintiff reasonably and justifiably relied on Defendants' false representations and misleading omissions. This includes the false submissions that each Defendant made on a daily basis, which was a necessary input for calculating Libor. Accordingly, Plaintiff relied on *each* Defendant's false submission with respect to *each* swap transaction listed in Exhibit A — including those where another Defendant or a non-panel bank was counterparty.

330. As a direct and proximate result of the wrongful conduct of each of the Defendants, Plaintiff entered into the swaps; traded in financial instruments linked to Libor and to other indices in reliance on Libor's integrity; made inflated payments (or received depressed payments) calculated in reliance on Libor's integrity; and/or entered into termination agreements for inflated consideration in reliance on Libor's integrity. Again, because each Defendant's submission was a necessary input for calculating Libor, *each* Defendant caused the foregoing harm to Plaintiff with respect to *each* swap transaction listed in Exhibit A—including those where another Defendant or a non-panel bank was counterparty.

331. As a result of the foregoing, Plaintiff has the right to rescissory damages; in the alternative to rescissory damages, Plaintiff has suffered damages according to proof. In addition, because Defendants' fraud was willful and wanton, and because, by their acts, they knowingly affected the general public, including but not limited to all persons with interests in Libor, Plaintiff is entitled to recover punitive damages.

SIXTH CAUSE OF ACTION
(AIDING AND ABETTING FRAUD AGAINST ALL DEFENDANTS)

332. Plaintiff realleges each allegation above as if fully set forth herein.

333. This count is against all Defendants, for joint and several liability for all losses associated with all of the transactions identified in Exhibit A.

334. Defendants aided and abetted the fraud and breaches of contract of the other panel banks.

335. By falsifying its own Libor submissions, each Defendant gave substantial assistance to the other panel banks in their conspiratorial efforts to suppress Libor.

336. By misrepresenting the integrity of Libor and omitting to disclose its manipulation, each Defendant gave substantial assistance to the other panel banks in their efforts to suppress Libor.

337. Each of the Defendants knew of the fraud perpetrated by the other panel banks, including other Defendants. Each knew of the representations and omissions made by the others. Each also knew that the representations and omissions made by each of the other Defendants were false and/or misleading at the time they were made.

338. Each Defendant gave substantial assistance to and/or facilitated and encouraged each of the other panel banks in their fraud by colluding to artificially suppress USD Libor. Each Defendant's submission was a necessary input for calculation of the published Libor. And, because Libor is calculated as an average and excludes outlier submissions, Defendants could not have manipulated Libor as they did without assisting one another.

339. Plaintiff reasonably and justifiably relied on Defendants' false representations and misleading omissions when entering into the swaps.

340. As a direct and proximate result of the wrongful conduct of each of the Defendants, Plaintiff entered into the swaps; traded in financial instruments linked to Libor and other instruments in reliance on Libor's integrity; made inflated payments (or received depressed

payments) calculated in reliance on Libor's integrity; and entered into termination agreements for inflated consideration in reliance on Libor's integrity.

341. As a result of the foregoing, Plaintiff has the right to rescissory damages; in the alternative to rescissory damages, Plaintiff has suffered damages according to proof. In addition, because Defendants' fraud was willful and wanton, and because, by their acts, they knowingly affected the general public, including but not limited to all persons with interests in Libor, Plaintiff is entitled to recover punitive damages.

SEVENTH CAUSE OF ACTION (UNJUST ENRICHMENT/RESTITUTION AGAINST DEFENDANTS CITI, JPMORGAN, AND RBC)

342. Plaintiff realleges each allegation above as if fully set forth herein.

343. This count is against Defendants Citi, JPMorgan, and RBC with respect to the role each of the foregoing played in the agreements in which it served as a counterparty.

344. By their wrongful acts and omissions, the Counterparty Defendants were unjustly enriched at the expense of and to the detriment of Plaintiff and have interfered with Plaintiff's protected interests.

345. As described above, the Counterparty Defendants knowingly acted in an unfair, unconscionable, and oppressive manner towards Plaintiff by suppressing Libor, and acted in conscious disregard for 's rights. Through their unlawful conduct, the Counterparty Defendants knowingly received and retained wrongful financial and other benefits at Plaintiff's expense.

346. As a result of their unlawful conduct, the Counterparty Defendants have realized substantial ill-gotten gains by misreporting their borrowing costs, manipulating Libor, and receiving windfall trading profits.

347. As a direct and proximate result of the Counterparty Defendants' unlawful and improper conduct, as set forth above, the Counterparty Defendants have been unjustly enriched

and Plaintiff has suffered damages. The Counterparty Defendants' retention of funds under these circumstances constitutes unjust enrichment as the Counterparty Defendants have no right to the benefits that were obtained through their unlawful conduct.

348. The financial benefits that the Counterparty Defendants derived from their unlawful manipulation of Libor and other misconduct alleged above rightfully belong to Plaintiff. Plaintiff may have no adequate remedy at law for the Counterparty Defendants' misappropriated gains. The Court should compel the Counterparty Defendants to disgorge to Plaintiff all unlawful or inequitable proceeds that the Counterparty Defendants received.

EIGHTH CAUSE OF ACTION
(TORTIOUS INTERFERENCE WITH CONTRACT AGAINST ALL DEFENDANTS)

349. Plaintiff realleges each allegation above as if fully set forth herein.

350. This count is against all Defendants for their intentional interference with Plaintiff's contracts and agreements with other Defendants and non-parties as set forth in the Exhibits.

351. Plaintiff has valid, enforceable contracts with Citi, JPMorgan, RBC, Wachovia, and Merrill Lynch.

352. Each Defendant's fraudulent and unlawful conduct described above, including each Defendant's false Libor submissions, was an intentional interference with Plaintiff's contracts with other Defendants and non-parties. Defendants' misconduct interfered with and disrupted Plaintiff's contracts by causing Plaintiff to receive reduced payments (or make inflated payments) in connection with the swaps due to an artificially suppressed Libor.

353. As described above, by their regular dealings with Plaintiff and others who dealt with Plaintiff, Defendants knew that Plaintiff had entered into financial instruments that

incorporated Libor such as the swaps at issue here. Defendants acted intentionally and with knowledge that their misconduct and wrongful acts would interfere with the Plaintiff's contracts.

354. As described above, Defendants acted solely out of malice and acted solely by dishonest, unfair, and improper means, including fraud or misrepresentation.

355. Each Defendant's interference with Plaintiff's contracts and agreements with other Defendants and non-parties injured Plaintiff. Because of Defendants' unlawful manipulation of Libor, Plaintiff received lower payments (or made higher payments) on the swaps than Plaintiff otherwise would have and terminated certain swaps by paying inflated termination fees.

356. As a direct and proximate result of Defendants' misconduct, Plaintiff has suffered damages. In addition, because Defendants' fraud was willful and wanton, and because, by their acts, Defendants knowingly affected the general public, including but not limited to all persons with interests in Libor, Plaintiff is entitled to recover punitive damages.

NINTH CAUSE OF ACTION
(TORTIOUS INTERFERENCE WITH PROSPECTIVE BUSINESS RELATIONS AGAINST ALL DEFENDANTS)

357. Plaintiff realleges each allegation above as if fully set forth herein.

358. This count is against all Defendants for their intentional interference with Plaintiff's business relations with other Defendants and non-parties as set forth in Exhibit A. During the Relevant Period, Plaintiff had business relations with issuers or sellers of Libor-based financial instruments, including Citi, JPMorgan, RBC, Merrill Lynch, and Wachovia.

359. Defendants' fraudulent and unlawful conduct described above, including Defendants' false Libor submissions and fraudulent demands for payment and/or cash from Plaintiff, interfered with and disrupted these business relations by defeating Plaintiff's

expectations that Libor would be set honestly and accurately and would provide a fair benchmark for the swaps and other Libor-based financial instruments.

360. As described above, by their regular dealings with Plaintiff and others who dealt with Plaintiff, Defendants knew of Plaintiff's business relations and acted intentionally and with knowledge that their misconduct and wrongful acts would interfere with and disrupt Plaintiff's business relations.

361. As described above, Defendants acted solely out of malice and acted solely by dishonest, unfair, and improper means, including fraud or misrepresentation.

362. Defendants' misconduct injured Plaintiff's business relations with other Defendants and non-parties. Because of Defendants' unlawful manipulation of Libor, Plaintiff received lower payments (or made higher payments) on the swaps than Plaintiff otherwise would have and paid an inflated termination fee on certain swaps.

363. As a direct and proximate result of Defendants' misconduct, Plaintiff has suffered damages. In addition, because Defendants' fraud was willful and wanton, and because, by their acts, Defendants knowingly affected the general public, including but not limited to all persons with interests in Libor, Plaintiff is entitled to recover punitive damages.

TENTH CAUSE OF ACTION
(CIVIL CONSPIRACY AGAINST ALL DEFENDANTS)

364. Plaintiff realleges each allegation above as if fully set forth herein.

365. This count is for civil conspiracy to commit a fraud on Plaintiff and to tortiously interfere with Plaintiff's contracts and business relations, brought against all Defendants for joint and several liability for all losses associated with all of the transactions identified in Exhibit A. Accordingly, each Defendant is being sued both individually as a primary violator of the law, as stated in this Complaint, and as a co-conspirator.

366. Defendants entered into a corrupt agreement to manipulate and suppress their Libor submissions during the Relevant Period.

367. Defendants each committed numerous overt acts in furtherance of that agreement, as detailed above, including submitting false Libor quotes to the BBA on a daily basis and actively concealing their misconduct, including by making false or misleading public statements about Libor's integrity.

368. Defendants intentionally took these and other overt acts described above to further the corrupt agreement between Defendants and to carry out a common plan to execute a fraud on Plaintiff, to tortiously interfere with Plaintiff's contracts and business relations, and to benefit Defendants.

369. Defendants acted with malice, and intended to injure Plaintiff by, among other things, lowering the payments Plaintiff was entitled to receive under the interest rate swaps and interfering with Plaintiff's contracts and business relations.

370. Each Defendant was at all relevant times fully aware of the conspiracy and substantially furthered it as set forth above.

371. As a direct and proximate result of Defendants' conspiracy, Plaintiff entered into the swaps; traded in financial instruments linked to Libor and other instruments in reliance on Libor's integrity; made inflated payments (or received depressed payments) calculated in reliance on Libor's integrity; and entered into termination agreements for inflated consideration in reliance on Libor's integrity.

372. As a result of Defendants' unlawful conspiracy, Plaintiff has the right to rescissory damages; in the alternative to rescissory damages, Plaintiff has suffered damages according to proof. In addition, because Defendants' fraud was willful and wanton, and because,

by their acts, they knowingly affected the general public, including but not limited to all persons with interests in Libor, Plaintiff is entitled to recover punitive damages.

ELEVENTH CAUSE OF ACTION
(VIOLATION OF SECTION 1 OF THE SHERMAN ACT AND SECTION 4 OF THE CLAYTON ACT AGAINST ALL DEFENDANTS)

373. Plaintiff realleges each allegation above as if fully set forth herein.

374. As set forth above, Defendants and their co-conspirators entered into and engaged in a contract, combination, or conspiracy to submit false USD Libor rates that were inconsistent with the definition of Libor, below their actual borrowing costs, and to do so in a coordinated fashion. Defendants' unlawful agreement to suppress Libor from at least August 2007 through the end of 2010.

375. Defendants' agreement to engage in concerted conduct was *per se* unlawful and an unreasonable restraint of trade in violation of Section 1 of the Sherman Act and Section 4 of the Clayton Act and inflicted antitrust injury on Plaintiff and other investors.

376. Defendants' contract, combination, agreement, understanding or concerted action with the co-conspirators occurred in or acted interstate and international commerce. Defendants' unlawful conduct was through mutual understandings or agreements by, between and among Defendants and the co-conspirators. These other co-conspirators have either acted willingly or, due to coercion, unwillingly in furtherance of the unlawful restraint of trade alleged herein.

377. The contract, combination, or conspiracy has had the following effects:

(a) Net payments due to Defendants under the swaps, and/or termination amounts paid with respect to the swaps were fixed, maintained, stabilized, and/or otherwise made artificial at higher, non-competitive levels;

(b) Plaintiff has been deprived of the benefits of free, open, and unrestricted competition in the market for interest rate swaps; and

(c) Competition in establishing the net payments made under and termination amounts charged for the interest rate swaps has been unlawfully restrained, suppressed and eliminated.

378. Defendants’ conspiracy, and resulting impact on the market for swaps and other Libor-based instruments, occurred in or affected interstate and foreign commerce.

379. As a proximate result of Defendants’ unlawful conduct, Plaintiff suffered antitrust injury in that Plaintiff has made supracompetitive net payments under the swaps, and/or paid supracompetitive termination amounts to unwind the swaps.

380. Plaintiff is entitled to treble damages for the violations of the Sherman Act alleged herein.

PRAYER FOR RELIEF

WHEREFORE Plaintiff prays for relief as follows:

An award in favor of Plaintiff against Defendants, jointly and severally, for all damages sustained as a result of Defendants’ wrongdoing, in an amount to be proven at trial, but including at a minimum:

a. That the unlawful conduct alleged herein be adjudged and decreed to be an unlawful restraint of trade in violation of Section 1 of the Sherman Act and Section 4 of the Clayton Act;

b. That Defendants, their subsidiaries, affiliates, successors, transferees, assignees and the respective officers, directors, partners, agents, and employees and all other persons acting or claiming to act on their behalf, be permanently enjoined and restrained from continuing and maintaining the conspiracy alleged in the Complaint;

c. Damages as provided under federal antitrust laws, and that a joint and several judgment in favor of the Plaintiff be entered against Defendants in an amount to be trebled in accordance with such laws;

d. Damages or other relief permitted by law or equity for Plaintiff's common law claims, including the monetary losses suffered by Plaintiff from, among other things, inflated payments to Defendants, reduced payments from Defendants, losses incurred during the termination process, and lost profits in an amount to be determined at trial;

e. Consequential damages;

f. Punitive damages;

g. Attorneys' fees and costs;

h. Prejudgment interest at the maximum legal rate;

i. Rescission;

j. Indemnification; and

k. Such other and further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a trial by jury on all issues so triable.

Dated: July 26, 2013

Respectfully submitted,

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EXHIBIT A

The City of Philadelphia's Interest-Rate Swaps

Counterparty	Notional Amount	Trade Date	Payment Dates until End of 2010	Rate Paid	Rate Received	Termination	Termination Fees Paid
Citigroup (formerly Salomon Brothers)	$86,105,000	12/5/02	8/1/05, 2/1/06, 8/1/06, 2/1/07, 8/1/07, 2/1/08, 8/1/08, 2/1/09, 8/1/09, 2/1/10, 8/1/10	4.53%	68.5% 1M LIBOR	n/a	n/a
Citigroup (formerly Salomon Brothers)	$381,275,000	12/5/02	6/15/03, 12/15/03, 6/15/04, 12/15/04, 6/15/05, 12/15/05, 6/15/06, 12/15/06, 6/15/07, 12/15/07, 6/15/08, 12/15/08, 6/15/09, 12/15/09	4.52%	68.5% 1M LIBOR	4/8/2010	$48,755,000
Merrill Lynch	$90,000,000	2/21/07	n/a	4.52275%	SIFMA	6/30/10	$15,198,000
Wells Fargo (formerly Wachovia)	$90,000,000	2/21/07	n/a	4.52275%	SIFMA	7/27/2010	$15,015,000
Royal Bank of Canada	$313,505,000	12/6/07	2/1/08; 8/1/08; 2/1/09, 8/1/09, 2/1/10, 8/1/10	3.829%	SIFMA	7/28/09 (partial)	$15,450,000

Counterparty	Notional Amount	Trade Date	Payment Dates until End of 2010	Rate Paid	Rate Received	Termination	Termination Fees Paid
JP Morgan	**$313,390,000**	**1/20/06**	**8/1/06, 2/1/07, 8/1/07, 2/1/08, 8/1/08, 2/1/09, 8/1/09, 2/1/10, 8/1/10**	**3.6745%**	**until 8/1/11: bond rate or SIFMA; from 9/1/11: 70% 1M Libor**	**#1: 8/12/09 (partial); #2: 8/31/11 (partial)**	**#1: $ 3,791,000 #2: $ 11,405,000**

EXHIBIT B

Contract Between The City of Philadelphia and Defendant Citigroup

1. On December 5, 2002, The City of Philadelphia (the "City") entered into an ISDA Master Agreement (the "City-Citigroup Master Agreement") and Schedule (the "City-Citigroup Schedule") with Defendant Citigroup ("Citigroup").

2. The City-Citigroup Schedule provided: "This Agreement will be governed by and construed in accordance with the laws of the State of New York, without reference to its choice of laws doctrine provided, however, that the capacity, power and authority of party B [the City] to enter into this Agreement and the interpretation and application of the covered indenture shall be governed by and construed in accordance with the laws of The Commonwealth of Pennsylvania." Part 3(e).

3. The City entered into the swaps with Citigroup listed in **Exhibit A**, each of which was evidenced in a Confirmation (the "City-Citigroup Confirmations").

   a. The City-Citigroup Schedule designated Citigroup as the Calculation Agent. Part 3(b).

   b. Each of the City-Citigroup Confirmations incorporated the 2000 ISDA Definitions.

   c. The 2000 ISDA Definitions provide that the Calculation Agent is "responsible for: (a) calculating the applicable Floating Rate [and] (b) calculating any Floating Amount payable on each Payment Date. . . . Whenever the Calculation Agent is required to act or to exercise judgment in any other way, it will do so in good faith and in a commercially reasonable manner." 2000 ISDA Definitions § 4.14.

   d. Citigroup breached the City-Citigroup Schedule for the reasons set forth in the Complaint.

4. Citigroup further breached provisions of the City-Citigroup Master Agreement under which: "[Citibank] agrees with [the City] . . . that, so long as either party may have any obligation under this Agreement or under any Credit Support Document to which it is a party . . . [it] will comply in all material respects with all applicable laws . . . to which it may be subject if failure so to comply would materially impair its ability to perform its obligations under this Agreement or any Credit Support Document to which it is a party." § 4(c) as amended by Part 4(c)(i) of the City-Citigroup Schedule.

   Under the City-Citibank Master Agreement, Citibank is liable for reasonable costs and attorney's fees incurred in this action: "A Defaulting Party will, on demand, indemnify and hold harmless the other party for and against all reasonable out-of-pocket expenses, including legal fees, incurred by such other party by reason of the enforcement and protection of its rights under this Agreement or any Credit Support Document to which the Defaulting Party is a party, including, but not limited to, costs of collection" § 9.

EXHIBIT C

Contract Between The City of Philadelphia and Defendant Royal Bank of Canada

5. On December 6, 2007, The City of Philadelphia (the "City") entered into an ISDA Master Agreement (the "City-RBC Master Agreement") and Schedule (the "City-RBC Schedule") with Defendant Royal Bank of Canada ("RBC").

6. The City-RBC Schedule provided: "This Agreement will be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania." Part 3(e).

7. The City entered into the swap with RBC listed in **Exhibit A**, which was evidenced in a Confirmation (the "City-RBC Confirmation").

8. The City-RBC Master Agreement provides: "[RBC] agrees with [the City] . . . that, so long as either party may have any obligation under this Agreement or under any Credit Support Document to which it is a party . . . [it] will comply in all material respects with all applicable laws . . . to which it may be subject if failure so to comply would materially impair its ability to perform its obligations under this Agreement or any Credit Support Document to which it is a party." § 4(c) as amended by Part 6(d)(i) of the City-RBC Schedule.

9. Under the City-RBC Master Agreement, RBC is liable for reasonable costs and attorney's fees incurred in this action: "A Defaulting Party will, on demand, indemnify and hold harmless the other party for and against all reasonable out-of-pocket expenses, including legal fees . . . incurred by such other party by reason of the enforcement and protection of its rights under this Agreement or any Credit Support Document to which the Defaulting Party is a party or by reason of the early termination of any Transaction, including, but not limited to, costs of collection." § 9

EXHIBIT D

Contract Between The City of Philadelphia and Defendant JPMorgan

1. On January 20, 2006, The City of Philadelphia (the "City") entered into an ISDA Master Agreement (the "City-JPMorgan Master Agreement") and Schedule (the "City-JPMorgan Schedule") with Defendant JPMorgan Chase Bank, National Association ("JPMorgan").

2. The City-JPMorgan Schedule provided: "This Agreement will be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania." Part 3(1).

3. The City entered into the swaps with JPMorgan listed in **Exhibit A**, which were evidenced in Confirmations (the "City-JPMorgan Confirmations").

4. The City-JPMorgan Master Agreement provides: "[JPMorgan] agrees with [the City] . . . that, so long as either party has or may have any obligation under this Agreement or under any Credit Support Document to which it is a party . . . [it] will comply in all material respects with all applicable laws . . . to which it may be subject if failure so to comply would materially impair its ability to perform its obligations under this Agreement or any Credit Support Document to which it is a party." § 4(c) as amended by Part 4(8)(i) of the City-JPMorgan Schedule.

5. Under the City-JPMorgan Master Agreement, JPMorgan is liable for reasonable costs and attorney's fees incurred in this action: "A Defaulting Party will, on demand, indemnify and hold harmless if and to the extent permitted by law the other party for and against all reasonable out-of-pocket expenses, including legal fees, incurred by such other party by reason of the enforcement and protection of its rights under this Agreement or any Credit Support Document to which the Defaulting Party is a party or by reason of the early termination of any Transaction, including, but not limited to, costs of collection." § 9 as amended by Part 4(16)) of the City-JPMorgan Schedule.